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Graphite

VOL. XXIII

JANUARY, 1921

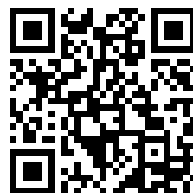
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JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



OFFICERS

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HARRY DAILEY, *Secretary*

J. H. SCHERMERHORN, *Vice-President*
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Comptroller
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Purchasing Agent
JOHN I. McCOMB

DISTRICT SALES OFFICES

New York, San Francisco, Chicago, Philadelphia, Boston, St. Louis, Buffalo, Atlanta

FOREIGN SALES REPRESENTATIVES

Pencil Dept. Products

Canada and Newfoundland

A. R. MACDOUGALL & Co., LTD.,
468 King St., West, Toronto, Ont.

Central and South America Cuba and Porto Rico

NATIONAL PAPER & TYPE Co.,
32 Burling Slip, New York, N. Y.
Offices in Principal Cities

Europe, Africa and India

L. G. SLOAN, LTD.,
41, Kingsway, London, W.C. 2
Representatives in Principal Cities

Australia and New Zealand

WILLIAM LEWIS,
Stafford House, Sydney, Australia

Philippine Islands

PHILIPPINE EDUCATION Co.,
Escolta 34, Manila, P. I.

China and Japan

AMERICAN TRADING Co.,
25 Broad St., New York, N. Y.
Offices in Principal Cities of China
and Japan

Graphite Products

WALWORTH INTERNATIONAL Co.,
44 Whitehall St., New York, N. Y.

WITH SALES OFFICES AT

Europe

Copenhagen
London
Milan

Australia

Sydney

Asia

Calcutta
Shanghai
Soerabaya

Latin-America

Havana, Cuba
Mexico City, Mex.
Sao Paulo, Brazil
Buenos Aires, Arg.
Santiago, Chile

Canadian Agents

CANADIAN ASBESTOS Co.,
Montreal, Quebec

Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

JANUARY, 1921

Number 1

What is Salesmanship?

DURING the years that the writer has been employed as a traveling salesman he has endeavored to study and know the true meaning or definition of salesmanship, to interpret, if possible, the factors inducing to that vocation, and with all the study and observance of the given rules it remains about as much of a complexity as ever. I doubt if salesmanship can be defined intelligently or in an abstract practical form, for it seems a science which must be worked out by each individual.

But if I were called upon to render a definition of salesmanship, I should begin by saying that honesty is the foundation—it is surely the basic principle upon which salesmanship is reared, and without it we cannot reach our maximum as a salesman.

The ethics of salesmanship demand truth, and the least variance from it, even when we are tempted to exaggerate to gain a sale, is poor business; it is unfair, and it is far better to have lost the sale than to have misstated the truth, and the time is fast ap-

proaching when no man will dare misrepresent his goods—in fact, it is here now, to the real salesman.

So truth and honesty are the main factors in salesmanship, for it cannot endure for long without them. I think the best salesman I know is the one who says the fewest words, but the one who lets his manner bespeak the truth, his every word and action denoting sincerity; he inspires the confidence of his prospective buyer, who believes the salesman holds his interest above that of making the sale.

Good business is mutual business. When buyer and seller enter into a kind of partnership, when a salesman feels that it is not good for a buyer, then it is not good for himself, and thus he guards the interest of his customer.

Some might say that this rule is not very practical or commercial, because it forbids the sale of hard stock, but even so it is no less the right way, because the right kind of business is a three-cornered partnership between manufacturer, salesman, and dealer, when they all guard each the other's

interest, because it is a mutual interest, and they dare not try to abuse those rights.

It does not matter how successful a man may be in the point of making sales, unless he clings to the truth his standing as a salesman will not endure very long, for no reputable firm can afford to keep him. His career and advancement, then, is marked according to his observance of the truth and honesty in his dealings.

So, if I were called upon to define salesmanship, my conception is simply this: "It is honesty, truth, and absolute fair dealings with every man, loyalty to my firm and my trade, but above all, loyalty to principle."—*The Sample Case*.

The New Fourteen Points

ONE of our "wet" correspondents suggests that since the first 14 points were early abandoned, these should be substituted:

1. That the name of Brandywine, N. Y., be changed to Coldwater, N. Y.
2. That "Drink to Me Only With Thine Eyes" be made the National Anthem.
3. That all mention of the Bourbon Kings be expunged from school books.
4. That on account of being suggestive, rye bread be withdrawn from sale by all bakeries.
5. That no part of a ship be referred to as the saloon, for the reason that such reference might raise false hopes.
6. That all bars be removed from harbor entrances or be designated by some other name.

7. That the word "port" be expunged from navigation charts and references.

8. That the use of alcohol lamps be forbidden by law.

9. That the useless 9,000,000 white jackets and aprons in this country be sent to the starving Bolsheviks.

10. That the word "still" be expunged from the American language and all dictionaries, and the word "quiet" substituted.

11. That all mint be plowed under and vanilla beans planted.

12. That any barber tantalizing a customer by using bay rum on his hair be given ten years.

13. That men with the "foot-rail" limp shall not be allowed to march in any public parades.

14. That all pretzels shall be made straight, instead of bent in the old familiar style, to avoid reminiscences.

—*Hardware World*.



Even Worse

"I WAS reading an article which says that jazz is popular in China."

"Well, if you've ever heard a Chinese orchestra you'll know why."
—*Baltimore American*.



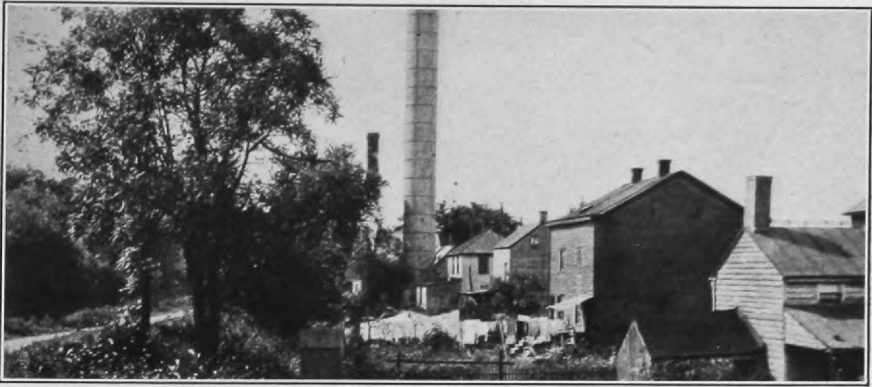
He Should Worry

HE was a wise man that said that he hadn't time to worry. In the day-time he was too busy, and at night he was too sleepy.—*The Black and Magenta (New Concord, Ohio)*.



Introducing Himself

"I'M a little stiff from lacrosse."
"Oh, Wisconsin?"—*Lampoon*.



Standpipe, Morrisville Water Co.

Morrisville, Pa.

TWELVE YEARS' PAINT SERVICE

TWELVE years ago, Superintendent Margerum of the above company painted this standpipe with Dixon's Silica-Graphite Paint, and it is still in good condition.

Morrisville lies in the scenic and historic Delaware River country.

Mr. Margerum is favorably known as an experienced water works' executive and he uses those supplies which in the end give the most economical service.



Among the Heights

HE—"Yes, I certainly like good food, and always look forward to the next meal."

SHE—"Why don't you talk of higher things once in a while?"

HE—"But, my dear, what is higher than food?"—*Life*.

Personal Conduct

SOME salesmen seem to think that it is nobody's business as to their personal conduct, especially after business hours.

A man's personality is an outward expression of a growth from within himself which is a result of his habits. For instance, we meet a man and size him up as a clergyman. The life which he has lived gives the outward appearance from which we form this opinion. The same thing may be said of a bartender or a grocery clerk or a traveling salesman for a wholesale dry goods house.

In addition to forming personality, if a salesman be guilty of misconduct and a client should see him or learn of this misconduct, that personal confidence, which we work so hard to acquire, is lost and this salesman cannot regain it.—*Merchandising Advertising*.



A Calumny

THE lady next door says she supposes Lithuania is the place the lithographs come from.—*Dallas Journal*.

Dixon's Locomotive Front-End Finishes

Serviceability

LOCOMOTIVE front-ends are exposed to three very destructive agencies: high temperatures, weather and the sulphurous gases present in smoke. A finish of superior quality is required to prevent corrosion of the metal. The necessary qualities have been determined in our service tests and have been incorporated in Dixon's Finishes. They resist heat and smoke, do not crack and peel, and give off no offensive and dangerous fumes when drying.

Appearance

Metal protection is of the first importance, but it is equally desirable that a front-end finish should improve the appearance of the locomotive. This feature is found in Dixon's Finishes—they produce a black or gray finish as desired, which is as attractive as it is serviceable.

Economy

Dixon's Finishes are reasonable in first cost. Their low up-keep is of greater importance. They are so little affected by heat, weather and smoke that their life is several times that of ordinary finishes. Add to the saving in material the labor charges which are avoided—the result is an item worth consideration.

Finishes are supplied as pastes or ready-mixed liquids.

READY-MIXED FINISHES

For ease and speed in application Dixon's ready-mixed finishes are unequalled. They consist of pigments and vehicles, machine-mixed in the proper proportions at our factory; the user is consequently assured of a uniform product of best quality, ready to apply as soon as received.

Graykote, Blackote

Ready-mixed finishes are supplied in two colors—a silver gray and a dead black—under the names of GRAYKOTE and BLACKOTE.

A brush is ordinarily used for applying, but it has been found that spraying with the aid of compressed air is a very satisfactory and more rapid method. For best results the front-end should be cleaned with a wire brush and the finish applied while the metal is warm or even hot.

Both colors work easily under the brush and their covering capacity is large. One gallon will usually be sufficient for one coat on four large front-ends. The finish improves as successive coats are applied.

PASTE FINISHES

These are furnished as paste stock for those who prefer to mix their own finishes. Gray and black are the standard colors. They are applied as follows:

Accumulations of rust and old material are removed from the front-end with a wire brush and scraper. The paste is thoroughly mixed with crude or fuel oil in the proportion of four pounds of paste to a gallon of oil, and the mixture should be applied with a brush while the metal surface is moderately warm. It will dry quickly, leaving a good finish. Any imperfect spots which appear later should be touched up with a small amount of finish.

PACKAGES

Dixon's Paste Finishes are supplied in 100 pound kegs and in barrels of about 500 pounds.

GRAYKOTE and BLACKOTE can be furnished in 5, 10, and 25 gallon kegs or in 50 gallon barrels.



Coal Car, Bethlehem Steel Co.

Bethlehem, Pa.

THE above illustration shows a 70-ton coal car owned by the Bethlehem Steel Company, Bethlehem, Pennsylvania.

The Cambria Steel Company was awarded contract for 1000 of these cars and they selected Dixon's Silica-Graphite Steel Car Paint, using it on all of the cars. This is a high and dependable testimony regarding "Dixon service."

Dixon's Paint is widely used by coal concerns, mining companies, railroads, and others for car equipment protection, because it stands up against the hardest kind of wear and weather, thereby saving in the cost of labor and material for frequent repainting.

The railroads are cutting down forces to an efficiency basis, and they cannot afford to waste LABOR. They must get the best possible service out of men and out of protective paint. Dixon's qualifies as the greatest economy paint because it lasts most years and therefore costs least each year. Don't buy paint by the "per gallon price."

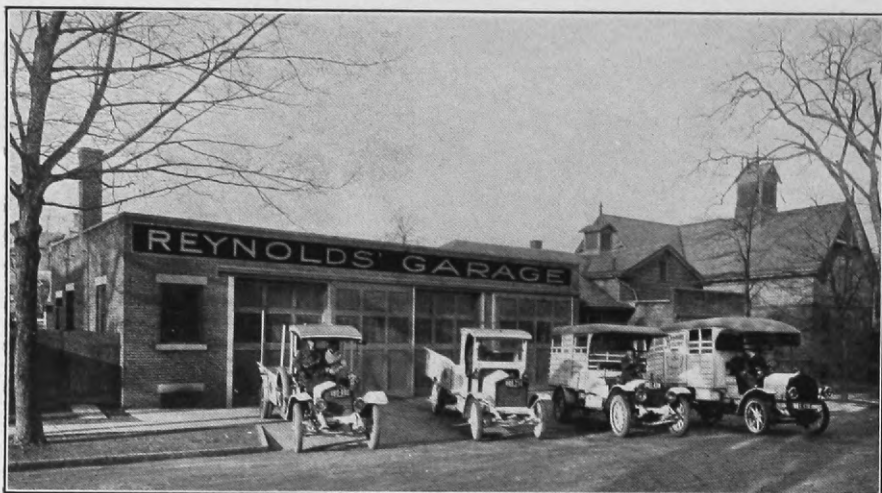
Dixon's Graphite Grease No. 8815

ALTHOUGH at normal temperatures this grease feeds nicely through compression cups, it possesses an unusual degree of resistance to heat, and retains its excellent lubricating properties and good body under conditions where ordinary greases rapidly melt and waste away.

It is particularly valuable for lubricating gears and bearings subjected to external heat. For lubricating car wheels in drying kilns and similar conditions where high temperatures are encountered, it is ideal.

The special value of a graphited grease is due to the graphite, if the graphite is of the proper kind. The proper kind should be a thin flake graphite, and so far as we know, there is no flake graphite with flakes so thin, so durable and smooth as the Ticonderoga Graphite used in the Dixon greases. The thin flakes of graphite fill up the inequalities of the wearing surfaces, making it wonderfully smooth with a film of graphite that prevents actual metal to metal contact.

If you have use for a grease of this nature you will do well to write for further information and prices.



Dixon's Lubricants used by W. T. Reynolds & Co.

THE above illustration shows the trucks and garage of W. T. Reynolds & Co., wholesale grocers of Poughkeepsie, N. Y.

Dixon's Lubricants are used on all of these trucks, and, needless to say, have proven most economical in the end. With many stops to make in a day, the gears of the trucks are subjected to the strain of starting many times. It is here that Dixon's Lubricants demonstrate their unusual quality of sticking to the gears at all times.

Other concerns maintaining a fleet of trucks can well profit by the experience of W. T. Reynolds & Co., and reduce their operating and repair costs to a minimum by lubricating their trucks throughout with Dixon's Lubricants.



Write for Booklet No. 190-G and our recommendation as to just what grease to use in your trucks.

Mexico City on the Job

RECENTLY the important daily paper *El Excelsior* of Mexico City held a speed contest for stenographers. Hundreds of the best writers in Mexico competed. The Mexico City branch of the National Paper & Type Co., distributors in Central and South America for Dixon Pencils, Crayons, and Erasers, saw that the stenographers were furnished with best tools of their profession obtainable—Dixon's ELDORADO—the master drawing pencil.

El Excelsior, in commenting on this contest, says: "It is our duty to state that with the desire to obtain the best possible results, we took great care to choose the finest materials we could obtain for the contestants, who needed in their delicate work a pencil particularly adapted to this class of writing, and after an extensive test we decided to use the famous Dixon ELDORADO—the master drawing pencil."

Cup Greases

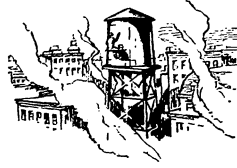
DIXON'S Cup Greases possess the peculiar merit of having the lubricating qualities of the best mineral oil and at the same time, being in semi-solid form, are simple, cleanly, and economical in application. These greases, composed almost entirely of mineral oils, are fluid the moment they reach the journal, the lubricating effect being that of oils with none of their disadvantages.

Dixon's Cup Greases are softer than most cup greases. It is our theory of lubrication that grease should flow readily into bearings and keep them cool, instead of waiting for bearings to heat them up sufficiently to melt the grease.

They are made in six degrees of hardness, but No. 3 or No. 5 is recommended for general use. All these greases retain their normal consistency through a wide range of temperature.

The selected flake graphite in Dixon's Cup Greases makes them much more efficient and durable than plain grease, and they can be used under conditions of heat, moisture, and pressure where plain grease could not possibly prevent overheating and cutting. The service records of Dixon's Cup Greases show great economy.

Dixon's Greases are found in service everywhere; in mills, mines, automobiles, and ships. Cups require but little attention when Dixon's is used, because it lasts longer.



Paint Economy

is not the price per gallon paid but the number of years of service a paint will give.

It is also painting before corrosion has started its insidious work.

DIXON'S Silica-Graphite PAINT

because of its better protective qualities, makes frequent repainting unnecessary, so gives better protection at less cost.

It is a natural combination of flake silica-graphite, mined only by ourselves. The vehicle is the best linseed oil obtainable.

Dixon's Silica-Graphite Paint will not peel or crack or flake off because of the natural elasticity of the flake graphite, while the silica is an anchor that withstands wear.

It is made in **FIRST QUALITY** only with a reputation for economy covering a period of 50 years.

Write for booklet No. 190-B, and long service records.

Joseph Dixon Crucible Co.

Jersey City, N. J.

Established 1827



Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII JANUARY, 1921 No. 1

New Year Resolutions

RESOLVING on the first, breaking it on the second, forgetting it on the third—such has been the principal pastime of early January.

It would be a harmless pleasure but for the fact that one transgression begets another.

Experience and observation cause us to comment—What's the use?

For all they're worth, why not forget New Year resolutions before they're made?—*National Hardware Bulletin.*

Keep Your Profits Clean

BBETTER than big business is clean business.

A clean profit is one that has also made a profit for the other fellow.

Any gain that arises from another's loss is dirty.

A man who makes a habit, every deal he goes into, of asking himself, "What is there in it for the other fellow?" and who refuses to enter into any transaction where his own gain will mean disaster to some one else, cannot go far wrong.

The only really charitable dollar is the clean dollar.—*Current Opinion.*

My Country

YOUR country is all that surrounds you, all that has reared and nourished you, everything that you have loved. That land you see, those houses, those trees, those smiling girls that pass, that is your country. The laws that protect you, the bread which rewards your toil, the words you exchange, the joy and the sadness which come to you from men and the things amid which you live, that is your country! The little chamber where you once saw your mother, the recollections she has left you, the earth where she reposes, that is your country. You see it, and you breathe it everywhere! Imagine, my son, your rights and your duties, your affections and your needs, your recollections and your gratitude, all united under one name, and that name will be

"MY COUNTRY"

EMIL SOUVESTRE
French Author, Soldier, and Patriot

—"Scope."

World's Oldest Paper Book

THERE is preserved in the Bibliothèque Nationale in Paris a papyrus roll which was discovered at Thebes by M. Prisse and is now distinguished by his name. It was first described in 1857 by M. Chabas, who stated that it belonged to the eleventh dynasty of Egyptian kings and was written about 2500 B.C. Yet it is but a copy of a much older treatise written by a governor or viceroy, Ptah-hotep, son of the seventh king of the fifth dynasty, Assa or Ded-da-ru, who, according to W. M. Flinders Petrie, began to reign about 3580 B.C. The book, therefore, carries us back nearly thirty-four or even thirty-six centuries before Christ. Yet even then it does not appear as a first attempt at giving instruction in proverbial form or by writing. It seems rather to belong to an advanced period of society, when education was systematic and books of instruction were employed. The author is stated to have been 110 years old, and his book opens with a remarkable description of old age. It proceeds in a style which recalls the Proverbs of Solomon, the Greek didactic poems, and even the homely "Poor Richard." It inculcates obedience, diligence, patience, and other virtues belonging to an official or servant.—*Family Herald & Star*.



Sufficiency

WALKER: "Have an accident?"

RIDER: "No, thanks, just had one."—*Puppet*.

African Teak is Strongest Wood

THE heaviest timbers are oak, teak, jarrah (an Australian wood), and greenheart; the lightest are willow, poplar, and spruce. The difference is enormous. A cubic foot of teak will weigh over 80 pounds, while a cubic foot of willow does not exceed 13 pounds. All timber is stronger at maturity than at any other time. Seasoning will actually double the strength of green wood. To test the strength of different timbers without the elaborate machinery used for demonstration purposes, a simple plan is to take a piece a foot long and an inch square, place it between two supports and hang to its center a tank capable of holding about 1000 pounds weight of water. This tank is slowly filled, and the bending and breaking strains carefully noted. The results of such tests go to prove that oak, usually considered the stoutest of timbers, is wrongly placed, and that ash really comes first. A piece of ash of the dimensions mentioned took a weight of 690 pounds before it broke; while oak broke at 501 pounds. Even beech proved stronger than oak, for beech took a weight of 625 pounds before cracking. Larch, useful timber as it is, comes a long way behind it, for it breaks at 440 pounds; elm goes at 405 pounds, and Scotch fir at 381. The strongest of all woods is the African teak oak, which will stand up to 855 pounds; it beats the famous East Indian teak, but not by a very large margin.—*Family Herald & Star*.



Dixon Pencil Representatives in Convention

MOST of the faces in this photograph are familiar to a large number of stationers in one or another section of the United States and Canada: they are the faces of the Joseph Dixon Crucible Company's Pencil Department Sales Organization, including the Manager of the Pencil Department and his principal associates at the General Office, the District Representatives in charge of Branch Offices, and the Pencil Salesmen ranging from Horace Van Dorn, of Boston, to Lloyd Wagner, of San Francisco, and Bill Bowen, of Houston, Texas.

The occasion of the photograph was the gathering together of these Dixon men for the annual Pencil Department Sales Convention. The business sessions of the Convention were held

in the auditorium of the Carteret Club in Jersey City, where three exceedingly busy and interesting days were spent,—from December 6 to 8, inclusive. The Convention was planned and presided over by Mr. Herman Price, and he had, at all times, the able and enthusiastic assistance of Mr. Andrew J. Pfaff, the Special Representative of the Pencil Department.

Mr. George T. Smith and Mr. J. H. Schermerhorn, President and Vice-President respectively of the Dixon Company, were on hand at the opening session to give the boys a welcome, and they sat in other sessions of the Convention when the opportunity offered. Mr. William Koester, Treasurer of the Company, who is also in the photographed group, made a very interesting address on present financial and credit conditions.

The Superintendent of the Pencil and Eraser Factories, Mr. John A. Tracy, and the Superintendent of the Pencil Lead and Crayon Factories, Mr. F. Engelbrecht, also attended the sessions of the Convention, so that there could be open conference on suggestions of mutual interest to the marketing and production departments.

On Wednesday evening, December 8, the visiting representatives, together with all of the officers, superintendents, and department heads in the whole Dixon organization, participated in a delightful banquet, which, in addition to excellent food, afforded a jolly good time, interspersed with some friendly suggestions from those capable of giving and observing them. Mr. Schermerhorn served as toastmaster.

The Convention was voted by everybody, from President Smith down, as the best conducted and the most effective the Dixon Company has ever held.

The photograph includes the following men, each of whom has been tagged with an identifying number:

- 1—John A. Condit
- 2—H. A. Vanderslice
- 3—J. H. Lewis
- 4—Lloyd A. Wagner
- 5—W. G. Lewis
- 6—G. B. Matschke
- 7—P. H. Meyers
- 8—H. A. Nealley
- 9—I. L. Levison
- 10—A. J. Pfaff
- 11—William Koester
- 12—Herman Price
- 13—R. J. A. Kaemmerer
- 14—W. G. Stringer

- 15—L. G. Clarke
- 16—J. Kip Edwards
- 17—E. A. St. John
- 18—Warren C. Weaver
- 19—M. H. Jackson
- 20—E. N. Detrich
- 21—R. I. Thornhill
- 22—H. B. Van Dorn
- 23—Guy W. Hart
- 24—Horace M. Johnson
- 25—Wm. B. Allen
- 26—C. P. Mueller
- 27—J. A. Biel
- 28—F. E. Croucher
- 29—John M. Ready
- 30—Wm. A. Houston
- 31—Edwin A. Sell
- 32—O. C. Steele
- 33—C. A. Orth
- 34—A. R. MacDougall
- 35—Geo. H. Reed
- 36—Wm. Bowen, Jr.

Genuine regret was expressed at the Convention because of the absence of Mr. D. A. Johnson, District Representative at Chicago, Mr. C. M. Harding of Pennsylvania, and Mr. John J. Leckie of the General Office, on account of illness.



Where the Speed Is

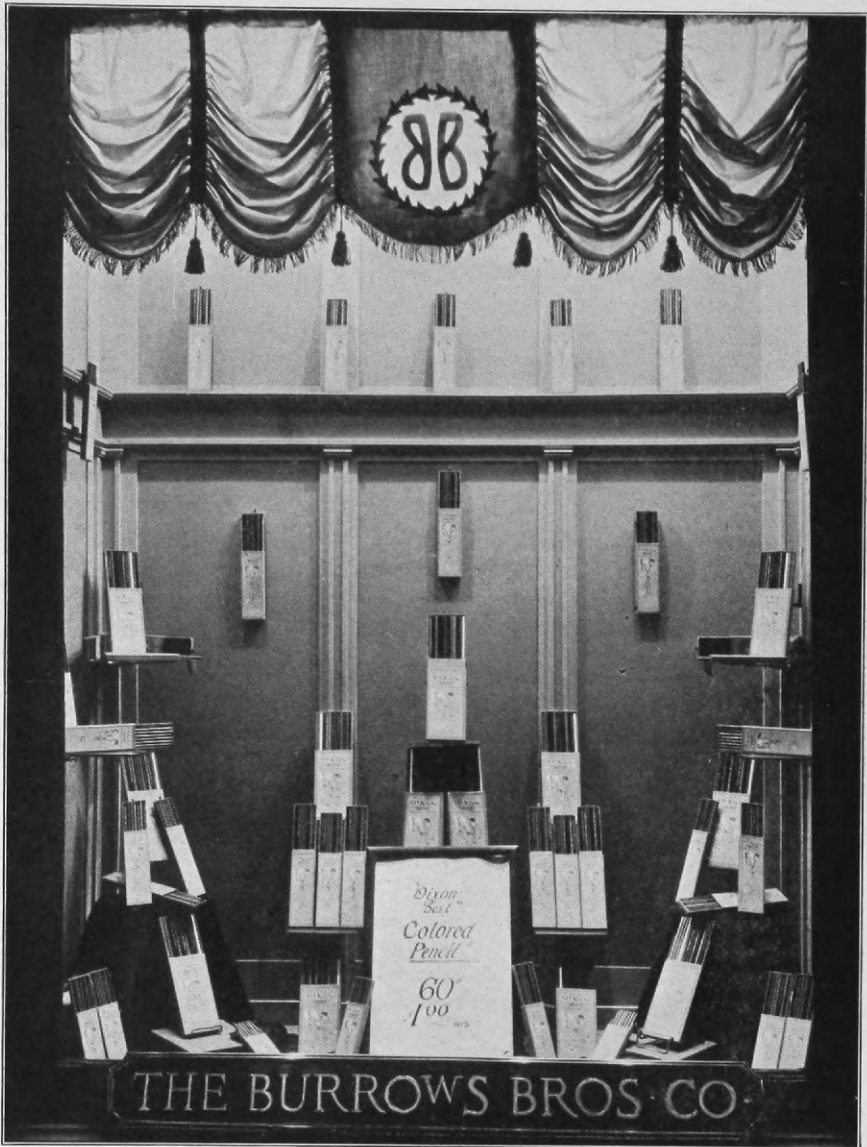
WHEN it comes to automobile parties, a machine is only as fast as the people in it.—*The Sun-Dial*.



Changing the Call

"THEY say Edison is working on a machine that will enable us to talk with the departed."

"I suppose the proper call will be Heaven-ho! instead of Hell-o!"—*Boston Transcript*.



Dixon "Best" Colored Pencil Window Display
by Burrows Bros. Co., Cleveland, Ohio

A Business Building Window Display

A VERY unusual window display is reproduced on the opposite page, and we extend our hearty congratulations to Burrows Brothers Company, Cleveland, Ohio, on their conception and execution of it.

In this case a display was made exclusively of Dixon's "Best" Colored Pencil Assortments Nos. 100 and 105. The best evidence of the real definite value of the display is to quote the following paragraph from a letter received from Burrows Brothers Company:

"As we already have the entire population crying for these assortments, all we need is the goods to supply the needs, so keep up the good work, and try to fill our order as soon as you possibly can."

Stationers, like department stores and other classes of merchants, have made wonderful strides in recent years in the development of window-dressing skill. The experience of Burrows Brothers Company is a clear illustration of the value of the single unit idea in window display advocated by many experts, especially when the goods themselves are of well-known quality and attractively packed, as in the case of Dixon's "Best" Colored Pencil Assortments.



One Place That Stumps 'Em

"No city," says a newspaper story, "has yet solved the problem of the reckless automobile speeder."

How about Venice? — *Detroit Motor News.*



Bowling Green Building, New York Telephone Co.

Broad and Water Streets, New York City

THE entire tonnage of steel (approximately 2000 tons) contained in the Bowling Green Building, Section B, is protected with Dixon's Silica-Graphite Paint, the standard paint for steel in the opinion of many of the leading architects and engineers. It is used on many of the most noted buildings of New York and other large cities.

"Bowling Green" is at the foot of Broadway, New York City. Here the old "Holland Dutch" settlers used to roll "bowls" when Pieter Stuyvesant and De Peyster were Governors.

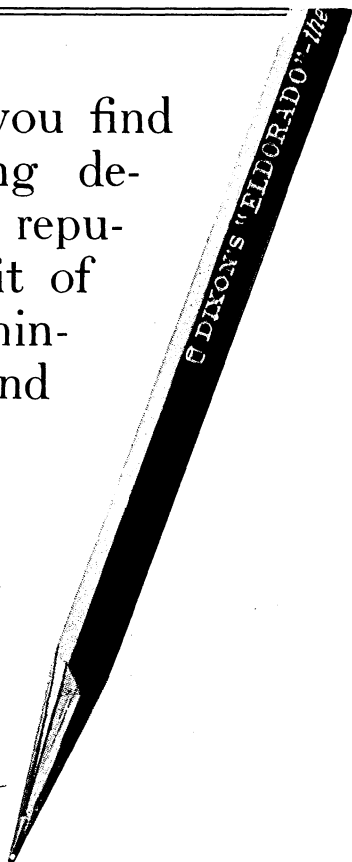
Write for Booklet No. 190-B, "Notable Buildings" and results of long service.

In "its track" you find steadily increasing demand; unexcelled reputation; the profit of sales made with minimum of effort and expenditure.

We refer to

**DIXON'S
ELDORADO**

"the master drawing pencil"



*Made in 17 Leads
—one for every need
or preference*

JOSEPH DIXON CRUCIBLE COMPANY, Pencil Dept. 190-J, Jersey City, N. J.

Canadian Distributors:—A. R. MacDougall & Co., Ltd., Toronto

Guide Post



maintained and the new ones erected much appreciated.

There will be many opportunities for building this year. Not necessarily building in wood or other fabricating materials, but building, or rather strengthening, of government, business, and personal character.

And speaking of building reminds us that the Guide Post has not as yet pointed out the line of Dixon Carpenters' Pencils.

It is led by "RED AND BLACK"—No. 997, whose flat bevelled shape and flat lead make it extremely popular. Its color, red, also makes it extremely easy to find when dropped in shavings.

"FRAMERS'"—No. 538, bevelled shape and maroon finish, is for those who prefer a narrower pencil and a harder lead than No. 997. Both "RED AND BLACK" and "FRAMERS'" are in large demand wherever lumber is used for building purposes.

Then there is "OREGON FIR"

—No. 589, oval shape and mottled finish, which has a very soft lead and is made especially for marking on wet lumber.

And lastly, "PLAIN CEDAR"—No. 410, oval shape and plain cedar finish; a good serviceable pencil.

So now, after pointing out these helps for builders, we wish you one and all a Very Happy New Year!

Paint Your Trucks!

Twelve Years' Paint Service

WE reproduce a letter received from J. L. Curtiss, Master Mechanic of the Eastern Wisconsin Electric Company of Sheboygan, Wisconsin:

"You will no doubt be interested to know that Dixon's Silica-Graphite Paint, Natural Color, was used on an old car truck in 1908. After twelve years' paint service, it is in as good condition as when the paint was first applied.

"During the period mentioned the car truck has stood in our yard unsheltered most of the time.

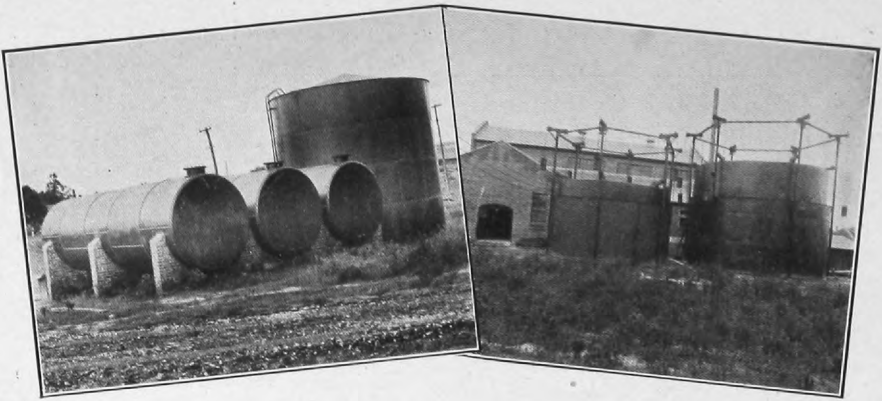
"We have also found Dixon's Graphite Wood Grease for gear cases on cars the most satisfactory grease we have ever used. We have used this material for the past eighteen years."

Too many owners neglect the proper protection of trucks. Dixon's can help your service problems in any line where graphite means satisfaction and efficiency.



Well Done on the Gridiron

"WHAT's your favorite wild game?"
"Football."—*Boston Transcript*.



Plant, Standard Gas Products Co.

Atlanta, Ga.

THIS plant was erected by the O. D. Goode Company and the Chattanooga Boiler and Tank Co., both of Chattanooga, Tennessee.

All the metal-work (inside and outside), including tanks, is painted with Dixon's Silica-Graphite Paint, the longest-lasting, most economical, protective paint. Dixon's is known by its high class of patrons. Their judgment is worth following.

The above illustrated equipment is the "last word and best invention" in electrolytic plants. In addition to oxygen and hydrogen, stearine will be produced. Stearine is a vegetable product (from cottonseed oil) and is used in the manufacture of "compound lard."

The Goode Company, as the work shows, are efficient contractors, and the Chattanooga Boiler and Tank Company executes boiler and tank work that cannot be beaten.

The South used to be called "the land of corn and cotton" in the plantation ballads, but it can be seen it

has also arrived at, and is taking a large part in, the industrial age.

Atlanta and Chattanooga stand at the head of this modernity. A double track railroad (Southern) has recently been completed from Atlanta, Georgia, to Washington, D. C.



Expensive Both Ways

THE ELDER: "You should begin to save up for a rainy day."

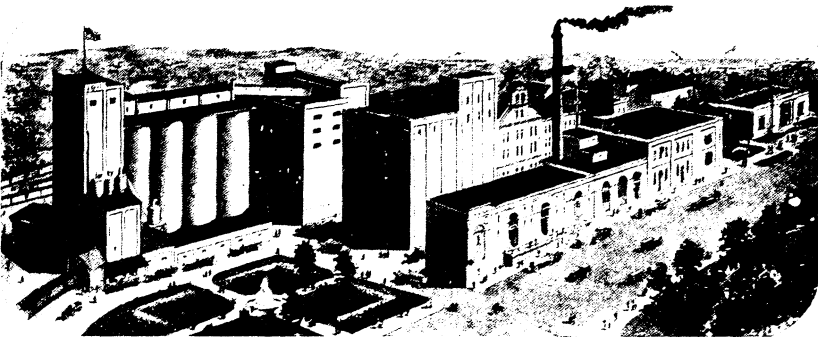
THE YOUNGER: "I will as soon as I get through saving up for a dry day."—*Detroit Gateway.*



Glad to Help

BOY SCOUT (to old lady): "May I accompany you across the street, madame?"

OLD LADY: "Certainly, sonny. How long you been waitin' here for somebody to take you across?"—*Judge.*



The Konrad-Schreier Company

Sheboygan, Wis.

MR. HERMAN SCHREIER is President and Mr. Alfred P. Steffen is Vice-President of this large malt concern, capacity 1,250,000 bushels.

Dixon's Silica-Graphite Paint is used for protection of this plant, of which the conditions are quite severe, namely dampness, fumes, heat, etc.

Take their kiln-turner, for example. Painting was divided into three equal parts: one of enamel, one of asphalt, and one of Dixon's Silica-Graphite Paint. The first two lasted respectively three and nine months, while Dixon's Silica-Graphite Paint, black, lasted six years or longer. When repainting was done, Dixon's was again used.

When reliable concerns such as Konrad-Schreier Company use and testify regarding Dixon's Silica-Graphite Paint, what more need be said? One is known by the company one keeps. Dixon's is proud to keep company with ably-managed concerns like the Konrad-Schreier Company.

When Meteors Hit the Earth

THE earth gains weight at the rate of about seventy pounds per minute. In a year the accumulation is 11,435 tons. This increase comes sifting down, mainly in the shape of fine dust from the meteors which are constantly striking our atmosphere and getting burnt up into small particles. Sometimes a meteor comes along that is too big to burn up. Some years ago one exploded over Iowa and later there were picked up over 5000 pieces, some running to 437 pounds in weight. The biggest meteor that is known to have hit the earth fell at Coon Mountain, Arizona. It made a hole which even now is 560 feet deep and three quarters of a mile across. The meteor itself is buried no one knows how far below.—*Family Herald & Star*.



His First Thought

WIFE: "Ta-ta, dearie; I'll write before the end of the week."

HUSBAND: "Good gracious, Alice, you must make that check last longer than that!"—*London Mail*.

DIXON CRUCIBLES

For Every Metallurgical Requirement

There is no possible requirement of the assay laboratory or melting department where crucibles are used that cannot be fulfilled more economically and satisfactorily than through the use of Dixon Graphite Crucibles.

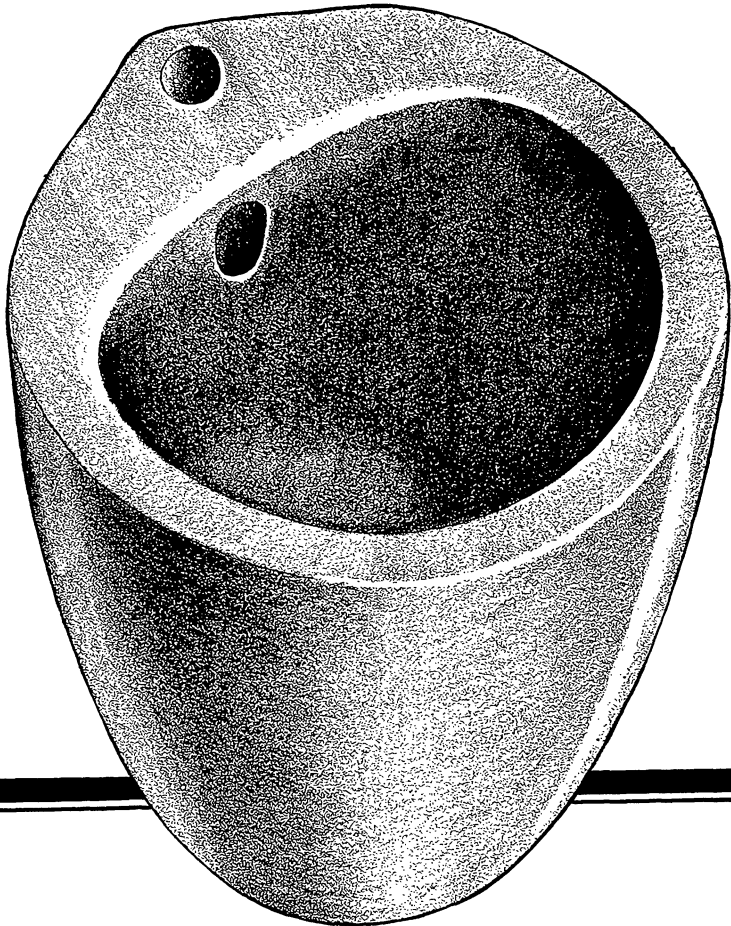
All Dixon Crucibles are uniform in composition, construction, and performance. They are backed by nearly a century of crucible-making experience.

Write for Booklet No. 190-A.

JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J., U. S. A.

Established 1827



Casting Shop Costs

By CASTER

IT is quite common to find those contemplating changes in manufacturing processes, through a desire to reduce costs and increase production, turning to new and entirely different methods and equipment before exhausting the possibilities of the process they already have. For example, there seems to be a widespread idea among many engineers that the only ultimate ideal in industrial heating lies in the application of electricity, and that to get "accuracy," "scientific control," "uniform temperature," "maximum heating efficiency," etc., it is necessary to have an electric melting furnace. This idea is largely due to lack of knowledge of the true principles of heating, furnace design, and operation. It would be impossible, not to say out of place, to outline these principles in this paper, but those interested will find a clear statement on the subject in "Heat Treatment of Steel" (Bullens). The remarks therein not only apply to heat-treating furnaces, but to industrial heating in general, including melting.

A specific, and very common, instance of this failure to consider more carefully the possibilities of an existing practice, lies in the crucible process of melting non-ferrous metals. Those who are faced with the necessity of cutting down melting and casting costs and increasing production, are very prone to dismiss the subject by concluding that the crucible method must go in favor of an electric furnace installation. The fact of the matter is, however, that the possibilities of the crucible process have not by any means received sufficient attention. In the first place, coal and coke can be replaced with gas or oil with remarkable reductions in labor and increased production, with the retention of the flexibility and control, due to the small units employed, characteristic of the crucible process.

Even with the oil standard practice using coal and coke pit furnaces, great improvement can be made. Suppose, for

instance, it is desired to evaluate the existing practice in a brass melting shop with the idea of determining where economies could be effected; it is necessary to consider the following factors which govern to a large extent the cost and quality of product:

- Design and construction of the furnaces;
- Organization and personnel of the shop;
- Crucibles;
- Nature and quality of the fuel;
- Methods of handling metal and castings.

There are many brass melting pit furnaces designed and built by "home talent" without regard to the principles of heat application, height and diameter of the stack, flue size and length, depth of furnace or pit from flue to grate bars, etc., and all require careful study and experience to secure the best results. A properly designed and well built set of fires will sometimes give 50% more production than a poorly designed set.

Casting shop labor conditions are very unsatisfactory in many plants. The usual system is to have a "caster" in charge of a set of fires with two or three helpers, depending on the molds to be handled. The caster is usually over-paid and does comparatively little work. Where several sets of fires are in operation this system leads to lack of uniformity of product, because each caster will have his own way of casting and pouring, and standardization becomes difficult. A better system is to have an experienced, intelligent foreman in charge of the shop and to break in green men to do the pouring and tend the fires and crucibles, etc. The method is quite feasible and will usually save several "casters" and will result in better control of the shop and greater uniformity of product. Many plants are practically at the mercy of their casting shops through having a number of independent casters who require to be pampered and petted while making "heroic" efforts to produce good metal. There is

no mystery or black magic about producing good castings. A combination of metallurgical supervision, discipline, and common sense is all that is required.

A crucible is a fragile, flexible object which will stand an astonishing amount of ill-treatment, but yet has its limitations. When cold it absorbs and retains a large amount of moisture from the air, which can only be driven off by prolonged heating at 300 or 400 deg. F. It is useless to heat the crucible for a few hours and then let it get cold and stand around for some time before using. In plants not having storage space on top of furnaces, or where these furnaces are not in continuous operation, a crucible heating oven, capable of holding at least a day's supply of pots, is an excellent investment. Careful attention must be paid to crucible tongs to see that they fit and do not get out of shape, and that they fit evenly all round. An iron anvil of the exact shape of the crucibles in use should be kept on hand so that the tongs can be hammered to shape frequently. After pouring is completed, the crucible should be put back in the fire as quickly as possible without being allowed to touch the floor. Erratic behavior and greatly varying number of heats is in nearly every case due to method of handling and treatment the crucible gets and is rarely due to the crucible itself. Of course, there are good and bad crucibles, but they are as a rule consistently bad or good, and if erratic results are obtained, the treatment they receive should be investigated before blaming the manufacturers of the crucibles.

A mixture of anthracite egg coal and coke is to be preferred. In the average shop a great deal of coal and coke is wasted through improper firing. In a large shop running on standardized products, firemen should receive instructions, and some form of bonus system can easily be arranged whereby economy in fuel can be secured.

It would require almost a volume to outline a proper cost system for a casting shop, best lay-out of weighing and scrap room, treatment of ashes, etc. This last subject is of great importance; it is obvi-

ous that ashes should be weighed from each set of fires, provision made for picking out coal and large pieces of metal, and when the quantity is sufficient, an ash treating plant installed.

We have outlined briefly some of the factors which will repay study in almost any plant. The point to be observed is that if the casting cost in a given plant is, say, 1.5 cents per pound, and granting that with a properly designed and built set of fires we can increase production 25%, through improving the practice in the treatment of crucibles, so as to obtain 25% greater number of heats, through attention to fuel economy, decrease the consumption of coal 10% and effect a 10% reduction in labor costs, we have reduced our casting cost to something like 1 cent a pound. Many still doubt if, with the flexibility required in the average shop, there is any cheaper method of melting and still maintaining the quality, unless a fluid fuel, such as gas or oil is used, instead of coal and coke.—*Metal Industry*.

DIXON WATER PROOF GRAPHITE GREASE—For gears, wire rope, cables, and chains, pump plungers, elevator plungers and guides, axles, etc., and all heavy, slow-moving bearings. Unaffected by fresh, salt, acid, or alkaline water.

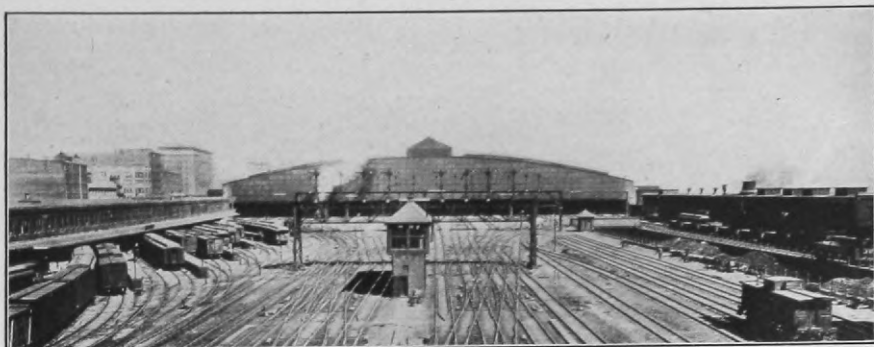
DIXON GRAPHITE BRUSHES—For dynamos and motors. Prevent wear of the segments, save regrinding of the commutator, stop sparking and pitting.



A Large Contract

EARLY MORNING CALLER: "Dunn & Grabbit have commissioned me to collect their little account."

STONEY-BROKE: "Then I congratulate you on getting a permanent job!"—*The Passing Show (London)*.



Boston Terminal Station

PROMINENT among the notable structures in New England is the Boston Terminal Station, shown in the accompanying illustration. It is one of the largest railway stations in the world, and this is Boston's great gateway to the South and West. Through its portals during 1920 nearly 45,000,000 passengers have passed.

This station has a land area of thirty-five acres and the total length of the buildings on the street front is 3300 feet. There is a total car capacity of 613 cars, with a seating capacity of passenger cars that can be placed against the platforms of 28,104. The daily train movements through the yard amount to over 4000. The daily mail handled amounts to over 300 tons.

The large amount of structural steelwork in the train shed exposed to severe climatic conditions, as well as the severe effects of locomotive fumes, makes it of the greatest importance to secure a protective coating as near perfection as possible. After many exhaustive tests of all varieties of paint known, it has been clearly

demonstrated that Dixon's Silica-Graphite Paint gives far better protection than any other product. For this reason the Boston Terminal Company have specified and are using Dixon's Paint exclusively for maintenance work.

Officials whose duty it is to select the proper material for the protection of exposed metal will particularly appreciate this practical demonstration of the remarkable wearing qualities of Dixon's Silica-Graphite Paint, which is not only better than all other paints for the protection of metal surfaces, but for exterior woodwork as well.

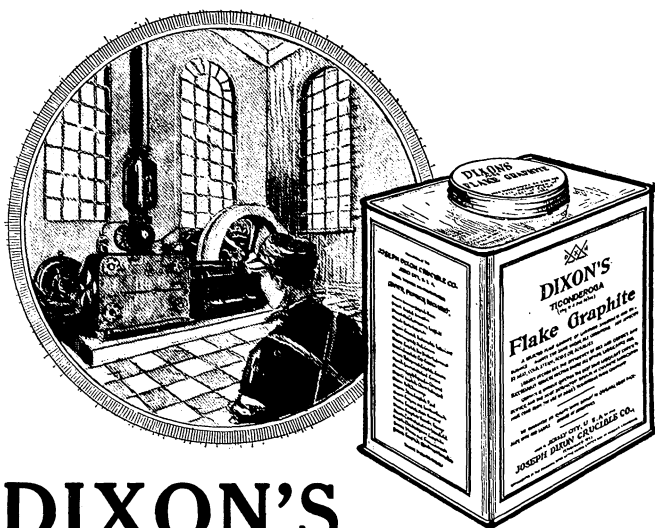
An Arabian Proverb

HE who knows and knows not that he knows, is asleep. Awaken him.

He who knows not, and knows that he knows not, is simple. Teach him.

He who knows not, and knows not that he knows not, is a fool. Shun him.

He who knows, and knows that he knows, is wise. Follow him unto the end.—*The Rotarian Magazine*.



DIXON'S FLAKE GRAPHITE

For Cylinder Lubrication

Causes smooth, easy valve action, lessens strains upon the valve gear, and assures uniform steam distribution—an important condition for full capacity. Less oil used in conjunction with graphite means less oil in the exhaust steam, an advantage in the case of condensing engines. Temperatures that vaporize oil have no effect on graphite; nothing equals flake graphite for lubrication in connection with superheated steam.

The proper use of flake graphite reduces the cost of cylinder lubrication at least 50 per cent.

All these benefits can be obtained to the fullest by the use of Dixon's Flake Graphite; the *original* flake graphite in the red tins.

We also make

Cup Grease
Joint Compound
Silica-Graphite
Paint
Waterproof
Grease
Flake Graphite
Motor Brushes
Solid Belt
Dressing
Paste Belt
Dressing
Boiler Graphite

*Will send catalog
on items checked*

Booklet No. 190-C explains how. Write for it to-day.

Made in JERSEY CITY, N. J., by the
Joseph Dixon Crucible Company

Established 1827



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FEBRUARY, 1921

No. 2



JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



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Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.
U. S. A.

Volume XXIII

FEBRUARY, 1921

Number 2

How Advertising Aids the Dealer

ADVERTISING aids the dealer in three important ways: first, it brings the manufacturer's goods into his store; second, it brings the consumer to him; and, third, it takes the goods to the customer.

Advertising might rightly be termed "a common carrier." The jobber is "the switchman" who routes each train at the junction. The dealer is the "conductor" who delivers his goods and passengers to their final destination and collects the fares.

Advertising is the dealer's efficiency engineer. It standardizes stocks, removes slow sellers, eliminates any necessity for specializing—the dealer's bugbear—and enables him to obtain quick turnovers and a large volume of business on a small initial investment.

Advertising is the dealer's silent salesman. What consumer has to be sold on the merits and quality of Delco Light, Eastman Kodak, Certain-teed Roofing, Uneeda Biscuit, and other well advertised brands. Day and night it is constantly creating,

maintaining, and increasing the dealer's trade and trading radius.

Display advertising in the windows, or on the counters, floors, and shelves, pays for a large portion of the dealer's rent. It attracts attention and often creates a want. The psychological effect of this want, coupled to the fact that the goods to satisfy it are right before him, usually results in the prospect making a purchase—a sale which requires the minimum effort on the part of the dealer or his clerk. Display advertising brings a return from every square inch and every cubic foot used.

Advertising builds good-will for the dealer. It makes him a leader in his community. A good store selling good products at fair prices is bound to prosper.

Advertising enables the dealer to devote his time to the selling of service. It places primary responsibility for quality on the shoulders of the manufacturer. It establishes uniform quality and standard values.

By advertising, the dealer can acquaint his trade with the fact that he

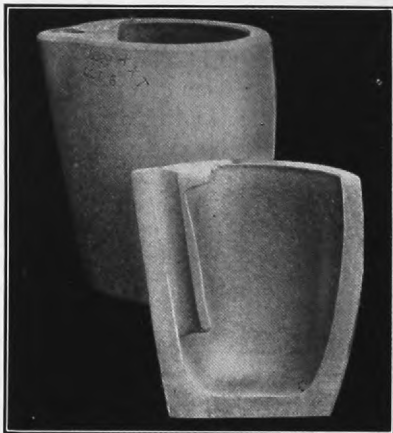
has something they need. Through advertising, the dealer is informed of new products which will be a benefit to his trade and mean more profits for him.

At the same time that advertising is aiding the dealer in these many ways, it is likewise benefiting the salesman. Dealer's sales and dealer's profit mean salesman's orders and salesman's profit. — *Merchandising Advertising.*

Dixon's Bottom-Pour Crucibles

THE illustration shows two views of the Dixon Bottom-Pour Crucible. In shape this crucible may be likened to a tea-pot with its "spout" incorporated within the main body rather than extending separately.

The lower view shows a half-section of the crucible and the upper view shows how the crucible appears as one looks down upon it.



Where it is necessary or desirable to secure pure, unoxidized metal castings, as, for instance, from white

metal or aluminum, the Dixon Bottom-Pour Crucible produces a casting practically free from all impurities.

The exposed surface of molten metal at the top of a crucible, increasing as the metal is poured, is subject to more or less oxidation. The fluxes and other impurities naturally rise to the surface and remain there. This surface (considered as an imaginary film) is the first of the crucible contents to be poured into the castings. Here is where the Dixon Bottom-Pour Crucible justifies its construction. The metal being poured from the bottom, the impurities of the "surface film" have no opportunity to get into the casting, but sink only with the level of the metal and are finally left in the bottom of the crucible.

The Dixon Bottom-Pour Crucible is made in standard sizes and prices, and further information will be sent upon request to us.

Dixon's Anti-Flux Brazing Graphite

THIS graphite contains no fusible matter, is unaffected by heat, and may be used with either flame or liquid brazing. Painting it on the parts where spelter is not desired to adhere, the work is left free from spelter. The graphite may be applied with turpentine in which a little gum or rosin has been dissolved, shellac, or molasses water. After the job is finished the graphite may be easily removed.



Handy Substitute

SPEAKING of substitutes for gasoline, there is the street-car ticket. — *Baltimore Sun.*



Arthur W. Chaffee's Residence, Moodus, Conn.

26 Years on Shingle Roof of Residence
10 Years on Barn

DIXON'S Silica-Graphite Paint gave this long service," writes Arthur W. Chaffee, owner of the above residence at Moodus, Connecticut, his home bearing the name of "Halcyona."

The house was built in 1888 and Dixon's Silica-Graphite Paint was used on the roof at that time, and again in 1894. It was also used on the barn roof in 1888, 1894, and 1910.

Mr. Chaffee is therefore a "boomer" of Dixon service. It certainly is the LONGEST LASTING Paint for wooden buildings. You need only to touch up the lighter trimmings every year, but Dixon's on the body of the building, you will note, gives a service of ten to twenty-six years.



Strenuous Diversion

"WOULD you advise me to travel for my health?"

"No," replied the doctor. "A man wants to be in first-class physical condition before he takes on the worries of travel nowadays."—*Washington Star*.



Water-Tank, American Process & Refining Co.

Mt. Holly, N. C.

THE water-tank shown above is owned by the American Process & Refining Co. It is painted with Dixon's Silica-Graphite Paint. Mr. C. E. Hutchinson is the manager, and the painting contract was awarded to J. M. Sprouse, Gastonia, N. C.

Down South, for industrial equipment, experienced managers require the old reliable protective paint. Three of Mr. Sprouse's painters can be seen working on the structure, and their relative size gives an idea how large the tank is.



A Business-Getter from Brazil

THE above illustration shows a newspaper advertisement for Dixon's Silica-Graphite Paint that was published in one of the newspapers of Porto Alegre, Brazil, by H. Theo. Moller, a dealer of the same place.

The advertisement illustrates the various types of structures that should be protected with Dixon's Paint. As published it measured 11½ inches deep by 6 inches wide.

H. Theo. Moller is to be complimented on this advertisement, but

more particularly on his far-sightedness in realizing the value of dealer coöperation.

Dealers in this country can well profit by the example set by this progressive Brazilian dealer.

You Can't Afford to Sell Cheap Paint

THERE is no question now that cheap paint never pays. However, many people have always insisted they would rather put on cheap paint and repaint oftener than to pay more for a more durable, lasting paint in the first place.

Granting that there may have been slight grounds for such reasoning some years ago, when painters could be employed at thirty or forty cents an hour, can there be any question about it now that painters must have eighty cents to \$1.25 an hour?

With labor cost so greatly exceeding the cost of paint, shouldn't every paint dealer make it his business to convince the customer that the best grades—the most durable, lasting paints—are cheapest in the long run?

To put it another way, can a dealer escape criticism and the probable loss of his customer's trade if he doesn't make every honest effort to show him that a second or third grade paint is not a good investment, because it costs just as much to have it applied as the very best grade, and it cannot be expected to give nearly the same service and wear.

In short, cheap paint plus 100 per cent. labor cost is dearer from a service standpoint than first grade paint plus 100 per cent. labor cost.—*Hardware World*.

A Testimonial for No. 675

IT is with a great deal of pleasure that we quote the following letter received from Nikrent Bros., Automotive Shop, Los Angeles, Cal.:

"I beg to advise you that I have been using your Gear Oil No. 675 in a Buick Transmission, and it has met with my greatest expectations. It is needless to add that in the future I shall take great pleasure in recommending it to my customers."

Dixon's Gear Oil No. 675 is a fluid lubricant for enclosed gears that require oil instead of grease. It is of the same superior quality as No. 677.

The principal use for No. 675 is for transmissions and differentials of automobiles that are designed for a thin lubricant. For the worm-driven rear axles of motor trucks it is almost a necessity.

Write for Booklet No. 190-G and Lubrication Chart, giving us the name of your car.

A Correction

IN the January issue of GRAPHITE we described, on page 4823, the new Bowling Green Building of the New York Telephone Company, which is protected with Dixon's Silica-Graphite Paint.

We should have mentioned in this article that the architects of this building were McKenzie, Voorhees & Gmelin; Eidlitz & Ross, Inc., the steel contractors; Bethlehem Steel Company, steel fabricators; Cauldwell-Wingate Company, general contractors.



Union Sugar Company

Betteravia, Cal.

THE Union Sugar Company use Dixon's Silica-Graphite Paint on the structures shown above.

For cleanliness, economy, long service, severe conditions use Dixon's Paint.

The large companies and the experienced engineers use it. They know "what's what" in service, and such being the fact, efficiency men like these should be in "Who's Who"! The example they give can be relied upon.



Lest They Lose Count

IF all of Ireland is to indulge in the game of reprisals, there should be an official scorekeeper.—*Baltimore Sun*.



Colonel W. G. Barker, V.C., D.S.O.,
of the Canadian Air Force

A Famous Airman Flies with Cargo of "Master Drawing Pencils"

THE first cargo of merchandise ever landed in Canada by air was brought in the aeroplane of Colonel Barker, of the Canadian Air Force. The goods were taken from New York and landed in Toronto, where lives that enterprising Canadian business man, Mr. A. Roy MacDougall, of A. R. MacDougall & Co., Ltd., Representatives for Dixon Pencils in Canada and Newfoundland.

History tells us of no more thrilling and brilliant war career than that of the modest gentleman whose picture does honor to this page. An incident in this career was his midair meeting

with a fleet of sixty German war-planes, five of which he bagged, escaping himself unscathed. He is actually credited with having destroyed some sixty enemy aircrafts during the Great War.

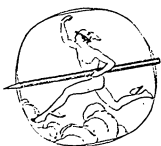
His valor Italy approved by two medals. France has honored him with the Croix de Guerre with Star. And Great Britain has decorated him with the 1915 Star, won as a member of the first contingent, which fought at Mons; with the General Service Medal; with the Victory Medal; with the Victoria Cross; with the Distinguished Service Order with Bar (which means he won the decoration twice); and with that decoration worn by only a few living men, the Military Cross with two Bars (won thrice). But more significant, perhaps, than these to a soldier are his wound stripes. For he was severely wounded, and will bear all his life marks got,

"In that place of pain and pride,
Where he nobly fought . . ."

From war to peace in an airship is the story of Colonel Barker's career since peace was declared. His firm is Bishop-Barker Aëroplanes, Ltd. As a member of the Rotary Club of Toronto, Canada, he was the hit of their recent meeting, the largest in attendance yet held, which took place on January 7 last.

Part of Colonel Barker's cargo on this memorable trip was a package containing small boxes of Dixon's ELDORADO—"the master drawing pencil." Each guest at the Rotary meeting received one of these boxes with the compliments of Dixon and of Mr. MacDougall, who is to be

felicitated on his enterprise which sent the "master drawing pencils" of the world in the airship of that brave master-airman, Colonel Barker, on his recent recording-making trip from New York to Toronto.



Advice in Regard to Use of Crucibles

REFIT tongs and shanks to crucibles every thirty days.

Keep fuel in dry place, as damp or wet fuel causes scalped crucible.

Don't wedge metal in crucible.

There should be about three inches coke space on sides and six to ten inches of fuel under the crucible, depending upon size of crucible.

Keep an accurate record of heats.

Store crucibles in a warm, dry place about two weeks, then anneal by heating very slowly and gradually—upside down, preferably—up to 250° F. or over.

Where oil or forced draft is used, be careful about too much air pressure, which produces an oxidizing flame, thereby eating away the plumbago in crucible.

Set crucible in bed of dry sand when removing from furnace, and be sure there are no clinkers left on bottom or sides of crucible.

Don't leave crucible in fire after metal is ready to pour.

If possible, recharge crucible and put back into fire before allowing to cool if an after heat is to be run.

Don't leave metal on crucible to cool.

Have shanks fit crucible, but if clips have to be used be sure they are wide clips. Better use two sizes of shanks—don't use "gates" as clips.

Avoid hard, sharp pieces of coke under crucible.

Be careful with use of poker; it is very easy to punch a hole through a hot crucible.

Place crucible in center of furnace so as to give equal fuel distribution all around.

Don't set crucible in cold draft or near open door in winter time.

Avoid fluxes unless absolutely necessary.

Don't drop heavy pieces of metal into crucible from a distance.

Don't drop large pieces of cold metal in crucible containing molten metal without first heating it, or it will "chill back."

Top of crucible should not set higher than bottom of flue hole at beginning of heat.

Be sure that the bricks in the furnace are not worn or bellied in. This is very important. Dixon's Crucible Clay and Graphite Mixture is the best refractory known for keeping furnaces lined up.

Going the Pace

"WHAT kind of a time is he having on his motor-trip?"

"Guess he's having a pretty lively time. He sent me a picture post-card of a hospital."—*Louisville Courier-Journal*.

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII FEBRUARY, 1921 No. 2

Initiative

INITIATIVE is the first step toward success. It is doing what should be done without being told. Brains and energy, with enough mental grasp and force of character to make every stroke count, are also initiative. The unthinking class is very large. It takes in those who don't know and therefore cannot think; and also those who do know but don't think. How much you think whether you can sacrifice your pleasures and comforts when they conflict with your aims and desires, should be your great life purpose.

Keep absorbing new ideas as well as new air. Good ideas are only seeds, they must be planted and tilled before they can produce. He can who thinks he can, so be sure nothing can stop you, and nothing can. The trouble with many men is when they accept a job they accept only a part of it. Initiative entails responsibility, and you cannot be successful if you avoid responsibility. You must have character to build initiative, so with ability to win it, and time and efforts to achieve it, you will find that initiative is the first step.—*McCaskey Bulletin.*

The Time That Counts

HOW much time do you spend every day talking to customers or prospects? How many hours a day are you actually selling? These questions were fired at a body of salesmen by a sales manager at a recent convention. "That is the time that counts," he added. "Every unnecessary hour you spend in travel, every time you make a long jump, when by a little better organizing of your territory and your itinerary you could have done as well by making a short jump, you cut down the hours you can spend face to face with a customer.

"You're selling nothing while you're on the train or in your car, or when you are lolling around for an hour or so after lunch. Get in more actual selling time. Organize your job so as to increase the hours you are selling and cut down the hours you are not."

As I listened I felt that a good many of us could apply this same reasoning to ourselves and our jobs. How many hours a day are we actually hitting hard? How many hours a day have we our eye straight on the ball? How many hours a day do we fritter away on inconsequential talk, on fussing and flitting around to little or no purpose, on doing trifling things instead of concentrating hard on the big things, on the main problems, on the things that yield the bread and butter? We wouldn't dream of wasting a cent's worth of material, yet never think of the many dollars' worth of time we waste. Short-sighted and foolish, isn't it? But isn't it true?

Minutes misspent mean dollars unearned.—*Forbes Magazine.*

The Pioneer Automotive Lubricant Manufacturer

AT the first New York Automobile Show, Dixon's Automobile Lubricants occupied a prominent place.

In those early days the "Show" was held primarily to sell the automobile idea rather than the individual merits of any particular product exhibited. The cars were demonstrated on a wooden track erected in Madison Square Garden.

Ever since that time, Dixon's Automobile Lubricants have occupied a conspicuous place among high-grade automotive lubricants. And through the years they have been developed scientifically and painstakingly to their present perfection.

Many distinct types of laboratory and operating tests, under conditions more severe than the most exacting actual service would require, have proved conclusively the superiority of Dixon's Automobile Lubricants.

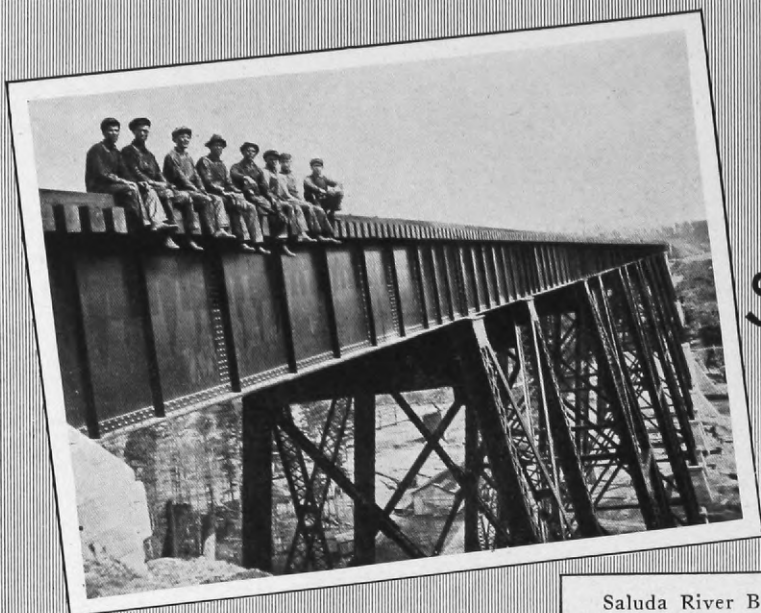
It is therefore in no way surprising that Dixon's Automobile Lubricants are rendering such conspicuous service under the most exacting and trying practical applications.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

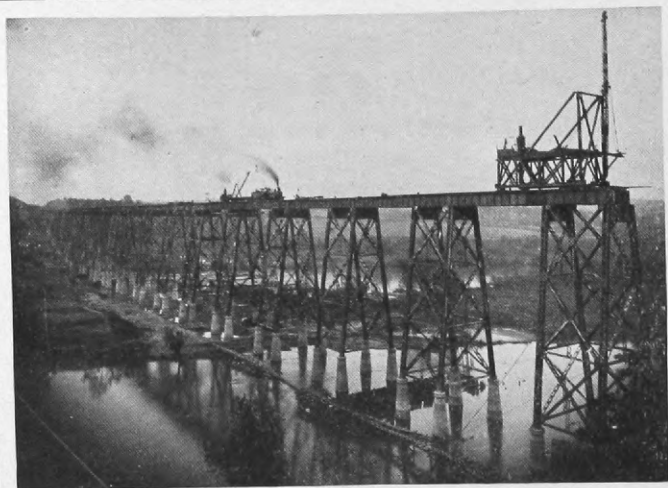


Established 1827





Saluda River Bridge
(Near) Greenville, S. C.



Bridge over James River
Lynchburg, Va.

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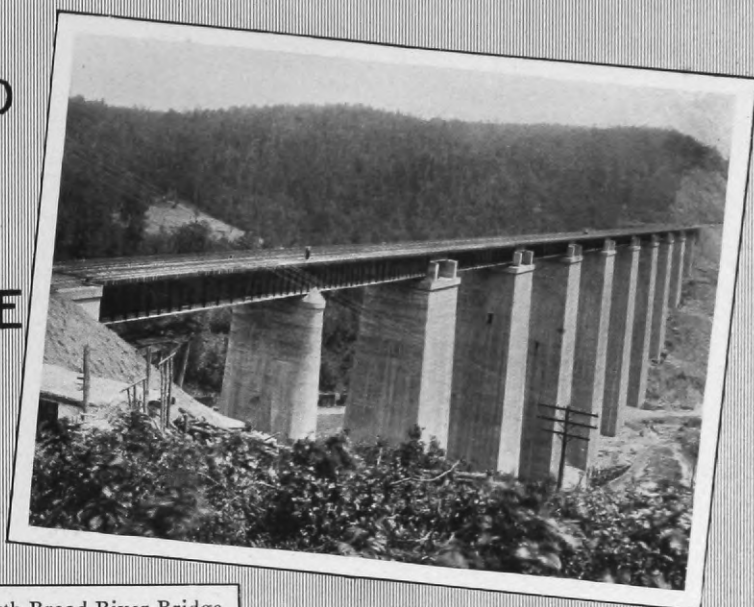
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North Broad River Bridge
(Near) Toccoa, Ga.

Southern Railway Company

ustrate above three bridges owned by the Southern Railway Company, painted
Dixon's Silica-Graphite Paint.

ble track bridge over the James River, at Lynchburg, Va., is 2,100 feet long
et high. It was painted in 1911 with Dixon's Silica-Graphite Paint, a service of

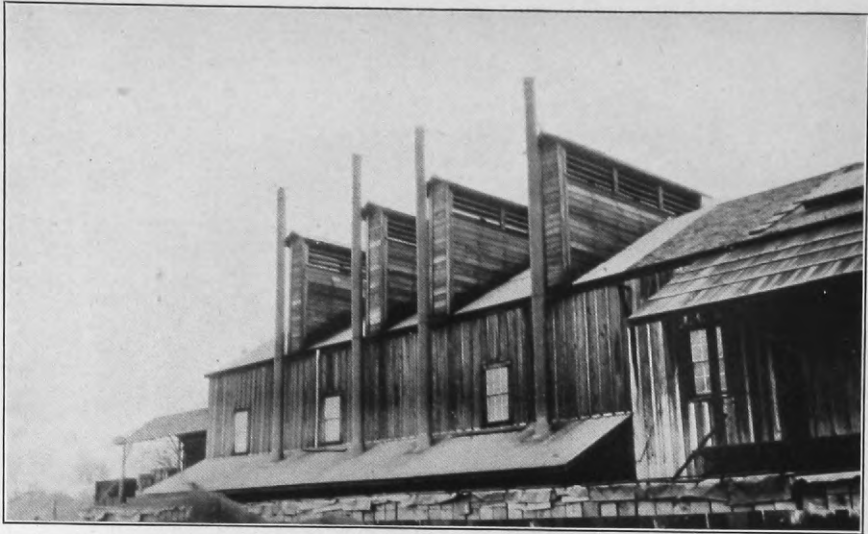
uda River Bridge, near Greenville, S. C., was built in 1917 and painted with
ica-Graphite Paint.

th Broad River Bridge, near Toccoa, Georgia, 2,316 feet long and 207 feet high,
d in 1918 with Dixon's Silica-Graphite Paint.

ridges were painted by Mr. J. M. Sprouse, Contracting Painter, of Gastonia,
o is well known as an experienced bridge painter.

at heat, wear of dust, and moisture in the South require a *real* protective paint
d the hard conditions.

s like the Southern Railway Company use Dixon's Silica-Graphite Paint be-
are sure of longer service and consequent yearly economy.



Valley Fruit Evaporating Co.

Watsonville, Cal.

THIS company protects its fruit driers and smoke-stacks, shown in the above illustration, with Dixon's Silica-Graphite Paint.

Dixon's Paint is equally serviceable for the protection of wood surfaces as for metal surfaces. Because of its peculiar pigment—flake silica-graphite—it is able to withstand heat and dampness for long periods of time.

Write for records of long service in your line of business and Booklet No. 190-B.



DIXON BOILER GRAPHITE—

Most simple and effective scale remover known. Makes boiler cleaning easy. Does not act chemically, cause foaming, affect quality of steam, or injure metal.

Send for Booklet 190-T.

Dixon's Graphite Curve Grease

THE most desirable lubricant for curved tracks is one which will be impervious to all climatic changes, one that is easily applied, reasonable in price, and lasting. Dixon's Curve Grease will, we believe, answer all of these specifications.

Flake graphite enters very largely into its composition, and due to the remarkable adhesion of flake graphite for metal surfaces, this grease will lubricate the rails much better and longer than the common oils and greases used.

Dixon's Curve Grease is easily applied, spreads freely, but sticks to the track. Warm temperature will not cause it to run nor will rain wash it off the rails. It will eliminate that screech heard when a train takes a curve, and will greatly reduce the wear of curved tracks and switches.



Water-Tank

Porterville, Cal.

THE water-tanks owned by the city of Porterville are painted on the interior with Dixon's Silica-Graphite Paint.

Dixon's is popular with water companies. The pigment is inert and does not injure potable water. Used on the interior and exterior of tanks.

If you are interested in a paint for this purpose, write us for details.

Gloomy Suspicion

"THE train pulled out before you had finished your speech."

"Yes," replied Senator Sorghum. "As I heard the shouts of the crowd fading in the distance I couldn't be sure whether they were applauding me or the engineer."—*Washington Star*.



Boiler Plant, Southern Pacific Company

Coalinga, Cal.

THE boiler plant of the Fuel Oil Department, the smoke-stacks, heater, tanks, piping, pumps, and other machinery connected with the pump station, are protected with Dixon's Silica-Graphite Paint. Dixon's Paint is also used at the other stations owned by the Southern Pacific Company.

No service paint as good as Dixon's around the factory and the boiler room, experienced engineers and superintendents will tell you. Look at this picture again. No coal used! Only fuel oil. Wonderful California!

Write us for long service records if you are interested in paint at this time.

DIXON'S ELDORADO

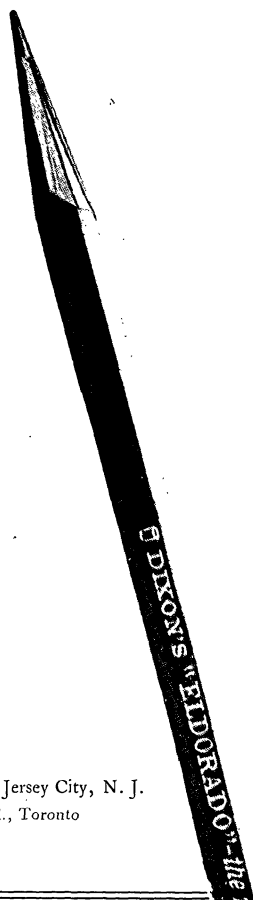
"the master drawing pencil"

Is it not a fact that the good opinion held by your customers on Eldorado pencil reflects credit upon you as a merchant just the same as it reflects credit upon us as manufacturers?



*Made in 17 Leads
—one for every need
or preference*

JOSEPH DIXON CRUCIBLE COMPANY, Pencil Dept. 190-J, Jersey City, N. J.
Canadian Distributors:—A. R. MacDougall & Co., Ltd., Toronto



"Guide Post"



'TIS a long lane that has no turning. — and what would be the use of a Guide Post on such a lane?

But on the road of many twists and turns the traveler, a-foot, a-horse, or a-motor, looks around him for

the friendly finger of the Guide Post showing him the way on through the maze.

And, readers all, bear this well in mind: your Guide Post family, although numerous and various as to the make-up of its members, is nevertheless a clan every one of which is upright.

And a Guide Post is no weather-vane, flying around and around up in the air, and making you dizzy to watch it, and causing you to wonder all the while which way the wind is blowing. Hardly! And yet it is true that this Guide Post, upright though it be, must seek out or point out "many inventions" in the uses of the Dixon Line of Pencils. And the word inventions vividly visualizes a carefully wrought and cleverly shaped bit of soft rubber composition which we call the Dixon Wedge Eraser Tip No. 450. Slip it on your pencil (no matter if your pencil *has* or *had* the regular metal tip with rubber plug) — and you will have an *eraser* that

- will *outwear* three pencils;
- will *stay on* the pencil;
- will *erase* large areas readily;
- equals a *rubber finger* for turning sheets;
- keeps point up* if pencil falls;
- keeps pencil from dropping* from the pocket.

An invention which every pencil user will welcome.

America

AMERICA is not a standardizing mold, but a test for confidence — a laboratory where ability may discover itself — a game in which skill is free to assert its quality.

This country does not remake men — it merely permits them to remake themselves.

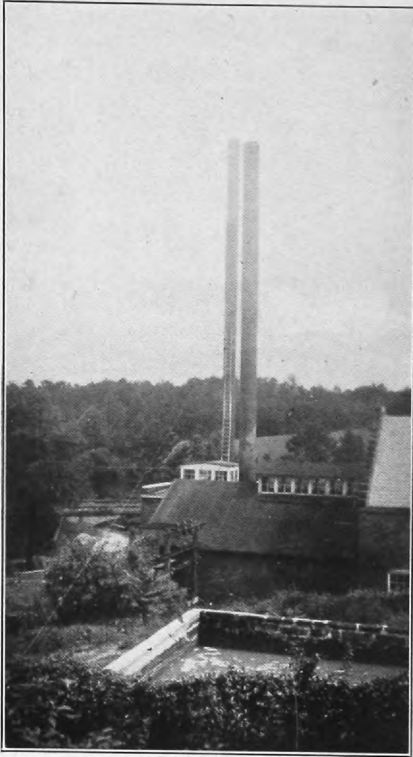
It cannot equalize citizens — it simply offers unrestricted chances for regeneration.

We are against extreme paternalism and communism because such doctrines tend to blunt exceptional gifts and rob progress of the precious quality of genius upon which it must exist.

To limit greatness, to stifle ego, to restrain purpose, and to deny ambition would destroy all our hopes in to-morrow.

We know how rare and how priceless are the ferments of enterprise and vision, and how much the mediocre, uninspired, quickly discouraged bodies of peoples are dependent upon them.

We are resolved to sustain our type of government because it guarantees, as no other, the rise to power and control of the folk best fitted to direct the course of affairs. — *McClure's*.



Smoke-stacks, Power Plant

Spartanburg, S. C.

THE structures illustrated above are painted with Dixon's Silica-Graphite Paint. Mr. J. M. Sprouse, of Gastonia, N. C., was the contracting painter.

The city of Spartanburg is the center of the cotton-manufacturing industry, and is also a college town.



Comprest Motion

"WHAT was he pinched for?"

"His father let him use the auto for an hour."

A Few Facts about China

CHINA has the largest population of any country in the world, one fourth of all the world's people.

China has coal deposits as great as those of the United States, yet is still importing coal from Japan.

Chinese farmers get the largest yield per acre of any farmers in the world.

In some sections a large portion of the tillable area is covered with the unmovable graves of ancestors.

Wages in China are low. Women silk-reelers in Shanghai get from eight to eleven cents a day for eleven hours' work.

Steel workers in Hanyang, common laborers, get three dollars a month.

In 120 of China's silk mills thirty-five per cent. of the women and children employed are under fourteen years of age.

Moving pictures are popular in China, particularly those of the slap-stick kind.

China has one of the world's best postal systems. Rates are cheaper and deliveries more frequent in Canton than in New York.

Half of the world's cigarettes are smoked in China.

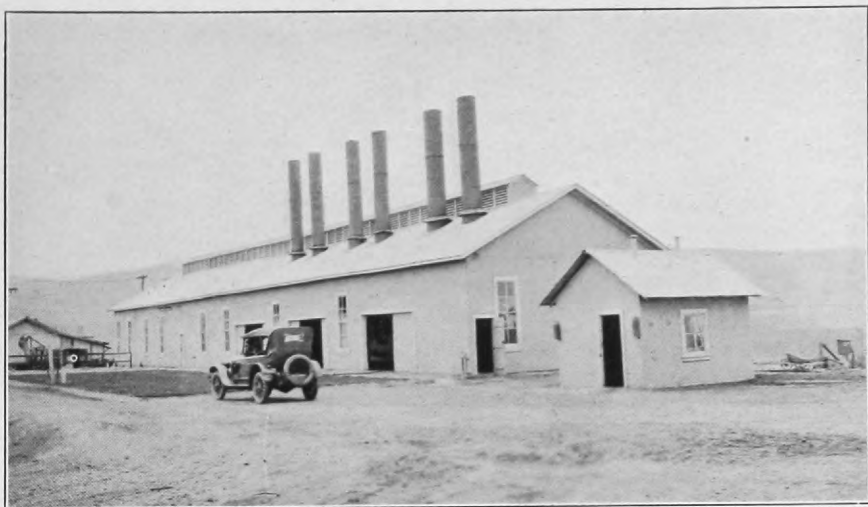
The Chinese invented printing before the West. Shanghai publishes seventy-three newspapers.

Over ninety per cent. of all the Chinese are illiterate.

Not one woman in a thousand can read or write.—*New Success.*



DIXON BRAKE CYLINDER LUBRICANT—Insures the smooth action of the air-brake system.



Pump Station, Union Oil Co. Orcutt, Cal.

THE smoke-stacks shown in the above illustration are protected from corrosion by Dixon's Silica-Graphite Paint.

For many years this paint has proven to users in all parts of the world that it is the cheapest per year of service.

We have records of from ten to fifteen years' service without repainting given on various types of structures. Write for those in your line of business.



Beyond Art

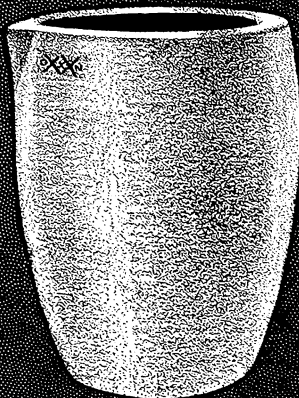
"THESE love scenes are rotten. Can't the leading man act as if he is in love with the star?"

"Can't act at all," said the director. "Trouble is, he is in love with her."—*Louisville Courier-Journal*.

Large Export Trade in Motor Vehicles

THAT the motor vehicle manufacturers of the United States have been busily engaged in cultivating foreign markets, despite the unprecedented domestic demand for their product, is revealed in the fact that exports of passenger cars and motor trucks in the 1920 fiscal year were 158 per cent. greater than the previous twelve months and nearly 75 per cent. larger than in 1917, the best previous year. In the twelve months ended June 30 last, the United States exported 115,519 passenger cars valued at \$41,577,684, a total of 139,875 motor vehicles worth nearly \$167,000,000. This, compared with 54,212 vehicles of all classes valued at \$79,086,190 shipped out of the country during the previous year, represents an increase of more than 59,000 vehicles over exports of 80,785 in 1917.—*Scientific American*.

DIXON CRUCIBLES



Since 1827



CRUCIBLE service and economy are direct results of proper care and handling. You get out of a crucible what you put into it. Careful handling means longer service, while careless handling means fewer heats.

Dixon Crucibles have built into them that quality which, if cared for, develops long life, economy, and many heats.

Joseph Dixon Crucible Co.

Jersey City, N.J., U.S.A.
Established 1827

Brass Melting Furnaces

A Few Suggestions for Improving the Present Construction of Crucible Furnaces

By FURNACE

IT is surprising to see how little attention and study have been given to the improvement of crucible melting furnaces, particularly with that type of furnace where the crucible is removed to pour. Where melting can be done in large quantities to a charge, as in some foundry work, there are many types of satisfactory solid, liquid, and gaseous fuel furnaces available, but both the rolling mill and brass foundry seem to adhere to the traditional coal and coke natural draft pit furnace, substantially the same design as that used a century ago.

Fig. 1 is a diagram of the conventional pit furnace. Well known as this type of furnace is, it is seldom designed and built properly. The relation of grate area, A, to size of flue opening, B, and to area of main flue, C, and stack diameter, is rarely properly proportioned. Dampers are seldom used intelligently and there is practically no control over the fuel burning process.

This type of furnace is by no means the only method of burning coal to heat a

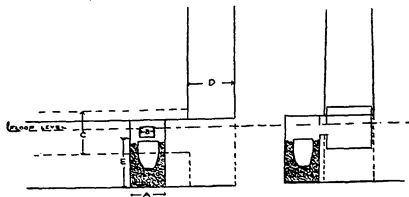


FIG. 1. TYPICAL PIT-FURNACE

crucible, and of all methods it is by far the most expensive, both in cost of fuel and labor. The best grade of egg size anthracite and coke must be used and the labor of firing and cleaning grates and ashes is heavy.

Fig. 2 is a suggested type of crucible furnace. This type of furnace is a com-

bination gas producer and furnace, and, strictly speaking, gas is burned, not coal. If the size of the installation warrants the investment, or if gas can be used for other purposes in the same plant, such as in annealing furnaces, etc., the gas may be produced in a central station and piped to the furnace. This is an economical proposition, although a somewhat larger investment is required; not so large, however, as an electrical installation of the same capacity, and with the further advantage of better control over the operations and the greater flexibility of the plant. The cost per pound of good metal produced should be materially less than with any other method.

The type of furnace for burning gas which is piped to it is extremely simple, merely consisting of a chamber sufficiently large to leave about 4 inches of space all round the crucible and 12 inches head room, with proper flue connection and a small hole at the floor level to allow spilled metal to run out. The burner opening is best placed at one side and on the bottom of the chamber; low pressure air is used, at about 16 ounces. The most important feature of this type of furnace is the proper regulation of gas and air supply. Most of the cases where gas furnaces have given trouble is due to poor regulation of air and gas. Long smoky flames streaming from every open-

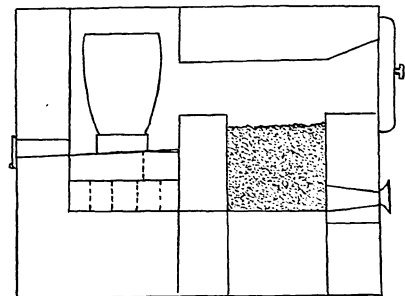


FIG. 2. SUGGESTED PIT-FURNACE

ing in the furnace wastes both fuel and time; this is a frequent sight in many shops, and it would seem as though many people are not satisfied without such flames and pollution pouring from their furnaces. A good furnace tender is a crown jewel and he should be one of the highest paid men in the shop.

Oil fuel offers the same advantages as gas and for small installations is very convenient. The type of furnace is the same and low pressure air should be used. The type of burner is not of particular importance except that it should permit constant adjustment. The same care and attention to proper regulation of air and oil are necessary.

The advantages of a gas or oil installation are:

1. Greater production. Each fire, or furnace, will melt from 125 pounds to 200 pounds metal per hour, depending on the melting point of the alloy and the air supply available.
2. Less labor.
3. No ash treating.
4. Less metal loss on account of faster melting and cleaner working conditions.
5. Less wear and tear on crucibles.

And in addition, all the advantages of the old crucible process are retained, particularly the flexibility of plant and control of the quality. The flexibility of plant is an important advantage; small orders for copper, brass, bronze, and nickel alloys can be put through simultaneously, without any changing over or expense due to operating a large furnace on a small charge.

The prospective purchaser of brass melting equipment is advised not to look for a furnace, as such; not to imagine that any one type of furnace, however new, is the solution of all his troubles. Various types of furnace melting devices are giving good service in some cases; in others they are not. The important thing is to permit careful study of the conditions by the furnace engineer, the metallurgist, and the production engineer, and not only by the man who has the furnace to sell.—*Metal Industry.*



The New Crucible Booklet

THE above illustration shows the new booklet just published by the Crucible Department.

This booklet illustrates the various kinds and types of Dixon Crucibles and Refractories. In addition to the illustrations, there are complete tables showing size, dimensions, and capacities of the various crucibles.

Every foundryman will do well to write for one of these catalogues, as it contains much valuable information which will more than repay you for the time and trouble of writing. Please ask for Catalogue No. 190-A.



Oakdale Gas Co.

Oakdale, Calif.

THE smokestacks shown above are protected with Dixon's Silica-Graphite Paint. The owners use it because they know it has no equal in endurance.

If you are interested in a smoke-stack paint, try Dixon's Silica-Graphite Paint and see what important economies it will produce for you.



Unnecessary Exertion

"You should try to curb your bad habits."

"What's the use? Soon all of them will be abolished by constitutional amendments."—*Life*.



Dearer Than He Thought

DEMOMOBILIZED TOMMY ATKINS (gazing at price-cards in shop): "They told me I was fighting for dear life, but I never dreamt it was going to be as dear as this."—*Punch* (London).

Center-plate Lubrication

THE rapid wear of wheel flanges under heavy cars, and of the flanges of rails on curved tracks, has caused considerable attention to be directed toward effective remedies for the trouble.

It is known that the stiff working of center-plates is responsible for a great part of the wear, and various means have been taken for lessening the friction of the bearings.

To meet the demand for a center-plate lubricant that could be easily applied and that would be lasting in its quality, Dixon's Graphite Center-Plate Lubricant was designed. It is a heavy-bodied grease in which is incorporated a large proportion of graphite, so that, long after the grease has disappeared from the bearing surfaces, effective lubrication is afforded by the graphite flakes that have become attached to the metal.

The use of Dixon's Center-Plate Lubricant makes a train flexible, and consequently prolongs the life of wheels and saves in tractive power on curves.



DIXON'S FLAKE GRAPHITE

Engineers will do well to study the cost of lubrication. Are you certain yours cannot be reduced? If cheaper and more dependable service can be had from engines and compressors because of better lubricated parts, then

you should decide if any possible economies have been overlooked in your plant.

Smooth valve action and uniform steam distribution are assured when you use Dixon's Flake Graphite. Scoring of cylinders is prevented, blowing reduced, oil eliminated from the exhaust, and the life of the packing prolonged. The cost of cylinder lubrication can be reduced by half.

When used in compressor cylinders oil is prevented from getting into the air lines and receivers and discharge valves do not carbonize or clog.

DIXON'S TICONDEROGA FLAKE GRAPHITE IS KNOWN THE
WORLD OVER AS THE ORIGINAL FLAKE GRAPHITE

Write for Booklet No. 190C.

JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY NEW JERSEY



Established 1827



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VOL. XXIII

MARCH, 1921

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1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



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Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

MARCH, 1921

Number 3

The Capitol


(Reproduction of Eldorado pencil drawing by Earl Horter—front cover)

In the soft Light
Of Dawn
The Capitol
Silent,
Vast,
Stared down
The wide Way. . .
Somehow
There came
From its Form
In the growing Day
An Emanation
Of Grandeur and Power
Overwhelming. . .

Something
There was
In the Air
As of Men
Marching
And the Glory
Of Trumpets. . .
And as I strode
Joyously along
I was swayed
As by the Rhythm
Of noble Music
Calling
To the Stars

A Little Study in Merchandising

FORTY-ONE years ago in the year 1880 the Joseph Dixon Crucible Company began the manufacture of their No. 450 "Wedge" Eraser which fits on the end of a pencil. This eraser had then the same merits of usefulness and economy that it has now. And little by little, year by year, its sale grew. But no particular effort was made to exploit it until five years ago. At that time, the Dixon Company concluded that they had in this article something pencil users would be delighted to know about, and accordingly applied modern merchandising methods to the marketing of it. The result has been that their business in the "Wedge" Eraser has increased by leaps and bounds, until to-day the daily production is nearly as large as the monthly production was up to five years ago. In fact, the Dixon "Wedge" Eraser has developed such popularity that imitations of it are now appearing on the market.

The original Dixon "Wedge" Eraser has the trade-mark  appearing on the top of the wedge and is always put up in boxes bearing the Dixon labels and Dixon trade-mark. A number of our customers have recently informed us of purchasing imitations of Dixon's "Wedge" Eraser in unlabeled boxes, having been given to understand that these were "seconds" of the Dixon "Wedge" Eraser. For the protection of the trade we desire to announce that we do not anywhere market seconds of Dixon "Wedge" Eraser.

Those erasers that come through which are not perfect never leave our factory.

Dixon's "Wedge" Eraser, No. 450, is packed in gross boxes. The same eraser, 450-C, is packed $\frac{1}{2}$ gross on card for display in store and window.

The Dixon Aim of Quality in the production of this "Wedge" Eraser Tip makes pleased customers for you. The genuine article is always "the only real thing" when it comes to the test of use.

DIXON Dealer Aids

Review the new Dixon Dealer Aids illustrated and described in this issue. You will find them worthy of your store and window. Note especially their simplicity, their suggestion of quality to harmonize with the goods themselves. This is the sort of advertising that reaches the mark. It has a message; it delivers itself of this message in a clear, impelling fashion. In the finest stationery window this material is in keeping with its surroundings. And, remember that this is only a part of the advertising effort constantly at work to help you dispose of your stocks of the Dixon Line of Pencils, Crayons, Erasers and Penholders.

See pages 4862, 4864, 4868, 4869, 4873, 4875.

Moline & Freeburg

THE Swede and the Scot,
Tires they sell, Dixon's and
whatknot.

Also a service unexcelled
This side of Heaven or —l.

This is an "ad" at adv. rates.

The above verse appeared in the February 2d issue of the *Spark Plug*, published at the Erie, Pennsylvania, Auto Show.



New **DIXON** "Best" Colored (Metal) Display Case

OUR salesmen for a considerable while back have reported to us an insistent demand for a special display case containing the twenty-four colors of Dixon "Best" Colored Pencils. We have accordingly placed on the market the No. 350-C case which is illustrated above.

All drawing supply and engineers' supply stores, as well as retail stationery stores and the book-rooms of colleges and technical schools, will find this to be a most effective method of distributing Dixon "Best" Colored Pencils to the customer who wants

to buy one each of several colors, as well as for the single color purchaser. That this is recognized by the trade is conclusively shown by the orders which have been taken by our salesmen from their customers on the showing of a photo of the model.

These cases will be ready for shipment after April 1 to those who place their orders promptly.



Reason Enough

SUSIE: "Papa, what makes a man always give a woman a diamond engagement ring?"

HER FATHER: "The woman."—*Edinburgh Scotsman.*



A Study in Sepia

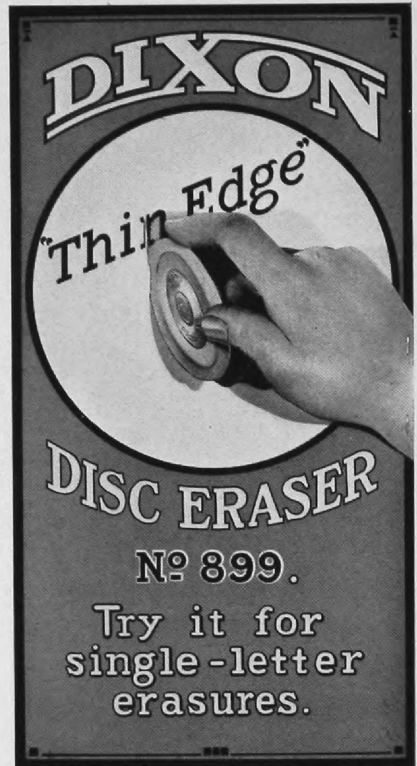
OCCASIONALLY a reproduction in black and white does more than justice to the original. Oftener the case is quite the reverse, —as in the reproduction of the beautiful head on the cover of the little booklet on Dixon “BEST” Colored Crayon Pencils.

In the original reproduction, as in the drawing itself, the color throughout is sepia. The artist used the Dixon “BEST” Sepia Crayon Pencil No. 335.

Salesmen are a skeptical lot, and hard to convince that direct advertising ever helps them actually to swing any orders. But we have strong testimony that the little brochure “A Study in Sepia” is a just and illuminating presentation of the merits of

the famous Dixon “BEST” Colored Crayon Pencils, and as such can and does help to increase their sales.

Write for a copy.



DIXON Dealer Aid

WINDOW CARD, 10 $\frac{7}{8}$ " wide \times 20 $\frac{5}{8}$ " high, with easel and cord, advertising the DIXON “THIN EDGE” DISC ERASER No. 899.

◆ Clever Rascal

“How extravagant of you to pay £50 for a diamond ring for me!”

“Not at all—I shall save on your glove bills.”—*London Opinion*.

A Little Essay on Dixon Pencil Advertising

SOME ONE has said that, for hundreds of years, civilization has been neither going forward nor backward, but just adventuring. Be that as it may, a glance at some recent happenings in the world of business inclines the observer to note certain interesting differences of opinion as to the amount of money it pays to adventure on the advertising wheel.

Many experts claim to have found the way to take the adventure out of advertising. They insist there is a way to make it safe and sound. We suspect that this is to start out in a safe and sane manner in the matter of advertising appropriation.

Some business exists because of advertising, some in spite of advertising, and some business would exist without any formal advertising at all.

It is a good many years ago since the first Dixon Pencil advertisement saw the light of day. During these years the Dixon advertising appropriation has steadily though not continuously increased. Business conditions, the possibility of realizing on the advertising investment, future prospects,—these have caused retrenchments now and again. But the advertising has been steady; and now it has reached a volume which makes it an item of value in the advertising world.

And as it has grown in size, it has grown in intensity and directness of aim. It has, moreover, having long ago learned certain invaluable things gained only through long experience, become notable for its atmosphere. It does not abound in full-page cres-

cendos. It is never freakish. It is pointed out by experts as an example of highly efficient, thoroughly plain and honest, pleasant and courteous copy. In the special field of art, this advertising is pronounced a contribution and a distinct advance.

Here is seen a hale and hearty growth. The mushroom springing up overnight is no symbol of its development, but rather the wide-spreading oak of many winters.

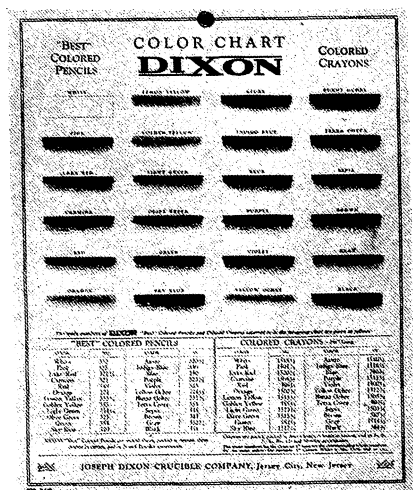
The adventurer type of businessman may be no fool, but those are who trust him. We have been amazed during recent months to see the lengths this type has gone in advertising. We have not yearned to follow in his footsteps. It is now plain to all where they lead.

We shall continue to advertise in a sane way. We believe we know the effectiveness of the Dixon Pencil advertising appeal developed through years of study and application. Waste in advertising is like waste in every other creative effort. It is inevitable. But the proportion of waste differentiates the skilled from the unskilled, the planned from the impulsive, headlong variety.

Finally, long-continued successful advertising bears another important implication; which is that the merchandise made by such an advertiser must be worthy of purchase, else it must long since have grown unsaleable in the pitiless light of publicity.



KEEP costs down to keep business up.



DIXON Dealer Aid
 COLOR CHART, 9" wide × 10³/₄" high, with eyelet, for hanging; shows the twenty-four colors of DIXON "BEST" COLORED PENCILS and COLORED CRAYONS.



DIXON Dealer Aid
 BLOTTER in gold, yellow, black and blue, 5¹⁵/₁₆" wide × 3³/₈" deep (to fit envelope of ordinary size) advertising DIXON'S ELDORADO—"the master drawing pencil." Can be furnished with dealer's imprint.



New **DIXON** Dealer Aid

BLOTTER, 3³/₈" wide × 6" deep (to fit envelope of ordinary size) advertising DIXON "BEST" COLORED PENCILS. The design is a reproduction of our No. 100 Assortment Box Label. Can be furnished with imprint of dealer.



Unnecessary Exertion

"You should try to curb your bad habits."

"What's the use? Soon all of them will be abolished by constitutional amendments."—*Life*.

A Lost Art

WHEN there is a good penman in a business office the chances are that he has gray hair. Most of the younger members of the staff make marks which resemble the tracks of an English sparrow hopping about in the snow.

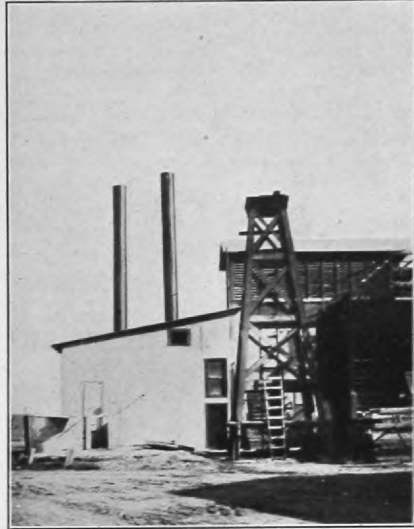
There was a time, during the Spencerian era, when no one was regarded as equipped for commercial life unless he could produce letters resembling a copy plate. When the use of the typewriter became general there was a distinct let-up in the emphasis on the second "R." And then somebody invented "vertical writing," which ended by lying down. It is now almost impossible to discover a young person who can write legibly.

Offices are possessed of considerable mechanical equipment, but there are times when writing must be done and when no one can be found to do it well. The demand for good penmanship far exceeds the supply.

In an effort to prepare children for business life the Boston schools are seeking to revive penmanship, not of the engraver's type, which is both slow and fatiguing, but legible and free. It is good work and should be carried through, for it applies to the boys and girls who leave school for college as well as those who go to work as soon as the law allows. College teachers may give higher grades to essays in type, but boys and girls must take examinations, and no instructor enjoys trying to decipher a paper as though it were an Egyptian inscription.

And when the schools have solved

the problem of penmanship they would do well to revive the multiplication table and spelling bee.—*Boston Globe*.



Coalinga Ice Co.

Coalinga, Cal.

DIXON'S Silica-Graphite Paint protects the smoke-stacks and condensers of the above company, as shown in the illustration.

Many leading companies of various kinds have found Dixon's Paint to be the most economical in the end because of the many years of service it gives. This is possible because of its pigment—flake silica-graphite as combined by Nature in our own mines.



Classification Needed

At the present terrific rate of divorce cases, we shall soon need a new reference-book—"Who's Whose."—*London Opinion*.

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII MARCH, 1921 No. 3

Work and Poetry

MR. CHESTERTON, the English writer, who has been lecturing and traveling in the U. S. A. for some time past, is quoted as saying that the way Americans idealize their work is in a very true sense poetic. He says we dream of work, carrying our business home with us, so that on and off the job, so to speak, we are really never off work. He says we stick to our work, showing a true love for it, reluctant to leave it; whereas, as he observes, his own countrymen are never better satisfied than when their day's work is over and they are free to forget it.

His observation on our attitude of mind, as a nation, is probably only too true. We work when we should and we work when we should be at play. And our nerves pay the fiddler; and our enjoyment of simple things is blunted and our lives run down before their time. We are swallowed up in our work, and this, as Mr. Chesterton so wittily observed, is poetic; this is Galahad saying, "If I lose myself I save myself."



GET cheap, hold cheap.

Buying and Selling

"BUYING . . with a view to quick turnover," recommends Mr. J. Ogden Armour in February "System."

That's a good business text for all of us in the present situation.

In order to carry it out successfully we need to get acquainted with what we have on hand, not in a formal or perfunctory way, but through a genuine study of stock as shown by the yearly inventory, and of actual sales records of the various items comprising our line. This study is likely to lead to discoveries, one of which may be new outlets for the disposition of our goods.

We have seen during the past few months more than one example of how it pays to get on the job, taking little or nothing for granted. Especially how the younger, and, perhaps, more enthusiastic, are leading the way up and out by doing just the sort of thing we refer to. And after all it is not to be wondered at that those who stripped for action and came back after months of strenuous roughing it in the open should have the resilience and steadiness of nerves the situation really calls for.

And the voice of Experience keeps telling us every one to anticipate now while the opportunity is right, so that, as the situation improves, we may be there with the goods to take every advantage of it.



EARN more, save more—not earn more, spend more.

DIXON'S No. 677

Gear Lubricant

AN automotive lubricant for enclosed spur and bevel gear installations, to do effectively the work which it is intended, must perform many vital functions, some of which are:

1. It must lower friction so that wear on bearings and gears is reduced to the minimum.
2. It must resist cold, permitting gears to shift as easily in freezing weather as in mid-summer.
3. It must show minimum temperature rise for bearings and gears.
4. It must show minimum power losses in hot and cold weather operation.
5. It must smother the cutting action of road dust and the particles chipped off in shifting gears.
6. It must insure quietly running gears by providing a film of lubricant between teeth meshing with a minimum clearance.

*For Worm
Drives Use
DIXON'S
No. 675
Gear Oil*

7. It must have long life, i.e., maintain unimpaired the above properties for a long period.

All of these conditions are met fully by Dixon's No. 677 Gear Lubricant. Complete details of interest to engineers will be gladly supplied upon request.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.



Makers of Quality Lubricants - Established 1827



NEW DIXON

DIXON'S ELDORADO

"the master drawing pencil"

Eases and quickens all pencil work

17 LEADS, ONE FOR EVERY NEED

	DIXON'S "ELDORADO" the master drawing pencil - 6B	VERY SOFT
	DIXON'S "ELDORADO" the master drawing pencil - 5B	
	DIXON'S "ELDORADO" the master drawing pencil - 4B	
	DIXON'S "ELDORADO" the master drawing pencil - 3B	
	DIXON'S "ELDORADO" the master drawing pencil - 2B	
	DIXON'S "ELDORADO" the master drawing pencil - B	
	DIXON'S "ELDORADO" the master drawing pencil - BB	
	DIXON'S "ELDORADO" the master drawing pencil - F	
	DIXON'S "ELDORADO" the master drawing pencil - H	
	DIXON'S "ELDORADO" the master drawing pencil - 2H	
	DIXON'S "ELDORADO" the master drawing pencil - 3H	
	DIXON'S "ELDORADO" the master drawing pencil - 4H	
	DIXON'S "ELDORADO" the master drawing pencil - 5H	
	DIXON'S "ELDORADO" the master drawing pencil - 6H	
	DIXON'S "ELDORADO" the master drawing pencil - 7H	
	DIXON'S "ELDORADO" the master drawing pencil - 8H	
	DIXON'S "ELDORADO" the master drawing pencil - 9H	VERY HARD

Made in U.S.A. by the
Joseph Dixon Crucible Company
Jersey City, N.J.

STEEL SIGN, 11 1/4" x 17 1/4"
Blue, gold, white and black

DISPLAY CARD
Lithographed

DIXON COLORED



Made in
U.S.A.

JOSEPH DIXON CRUCIBLE

DEALER AIDS

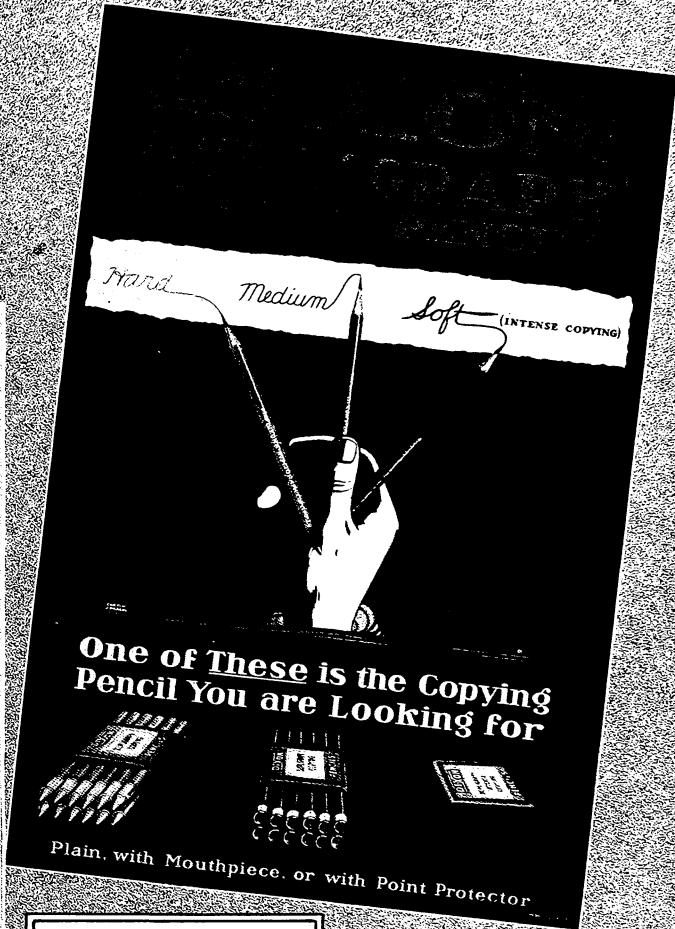
15 3/4" x 21 1/2"
Lithographed in 12 colors

"BEST" PENCILS

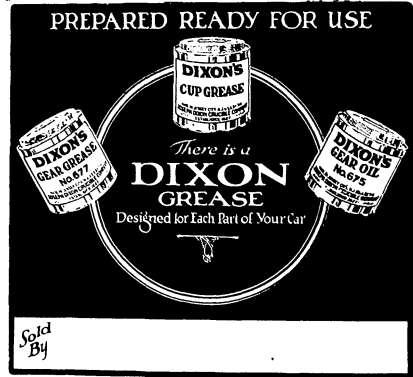
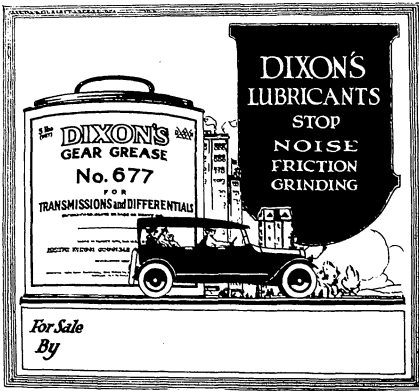


7-12-24
Color Assortments
and packed in bulk

COMPANY Jersey City, N.J. GRAPHITE CO. 1924



DISPLAY CARD, 15 3/4" x 21 1/4"
Lithographed in 12 colors



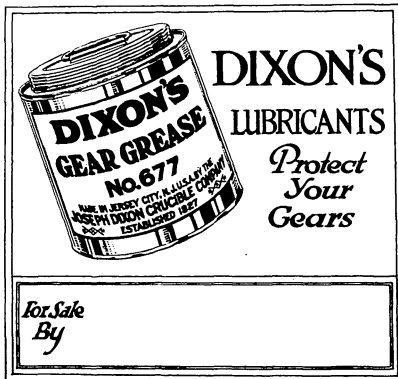
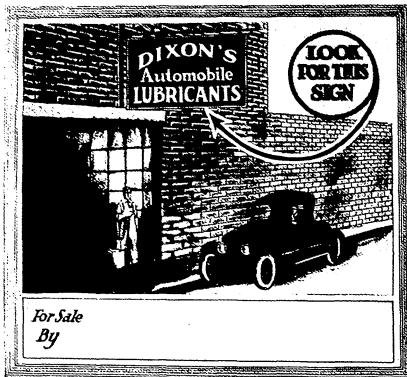
New Automobile Lubricant Lantern Slides

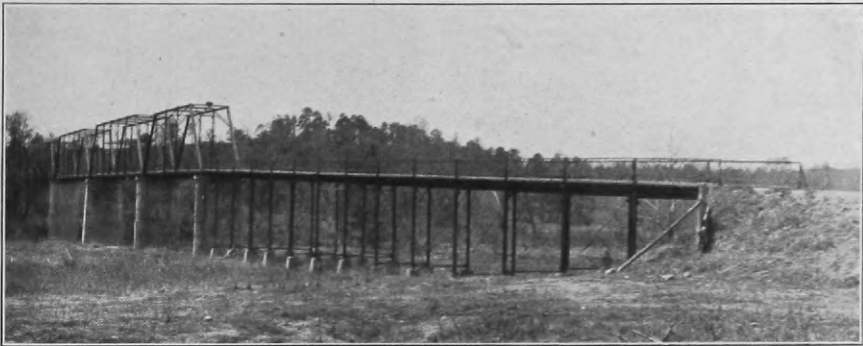
THE illustrations on this page show clearly the new set of colored lantern slides advertising Dixon's Automobile Lubricants. This new series is now ready for distribution and should be ordered by the key number R-34.

Here is an opportunity for dealers to increase their sales of Dixon's Automobile Lubricants by ordering and using a set of these slides. By arranging to have them shown in local motion picture houses, these slides will tell automobile owners the value and merits of Dixon's Lubricants.

In small town theaters and neighborhood theaters of larger towns, it is neither a difficult nor expensive matter for dealers to arrange for a showing of these slides.

These slides are for distribution to Dixon dealers, and we will be glad to send a set free of charge to these dealers in Dixon's Automobile Lubricants. Be sure to ask for set No. R-34 and write for them now so that they can begin to work for you.





Highway Bridge

Cherokee County, S. C.

THE structure shown above is one of eighty-three highway bridges in Cherokee County, ranging in length from 24 feet to 945 feet, painted with Dixon's Silica-Graphite Paint.

Mr. J. M. Sprouse, contracting painter of Gastonia, N. C., painted all of these bridges in 1919. Mr. Felix Lipscomb is the County Superintendent.

Experienced officials like Mr. Lipscomb take no chances. They assure themselves of service and economy by using a tried and reliable long-service paint.



DIXON PIPE JOINT COMPOUND—Makes tighter joints for steam, water, air, and oil piping. It never "sets" and joints may be opened at any time with ease.



Relapse Ahead

A PHYSICIAN claims to have restored two patients to sanity by pulling their teeth. When they see the bill they may go crazy again.—*Pittsburgh Sun*.

Prestige

THE DE VINNE PRESS of New York City state that real prestige talks for itself. It comes to nations, individuals, and business concerns only as their neighbors and their associates recognize it without question.

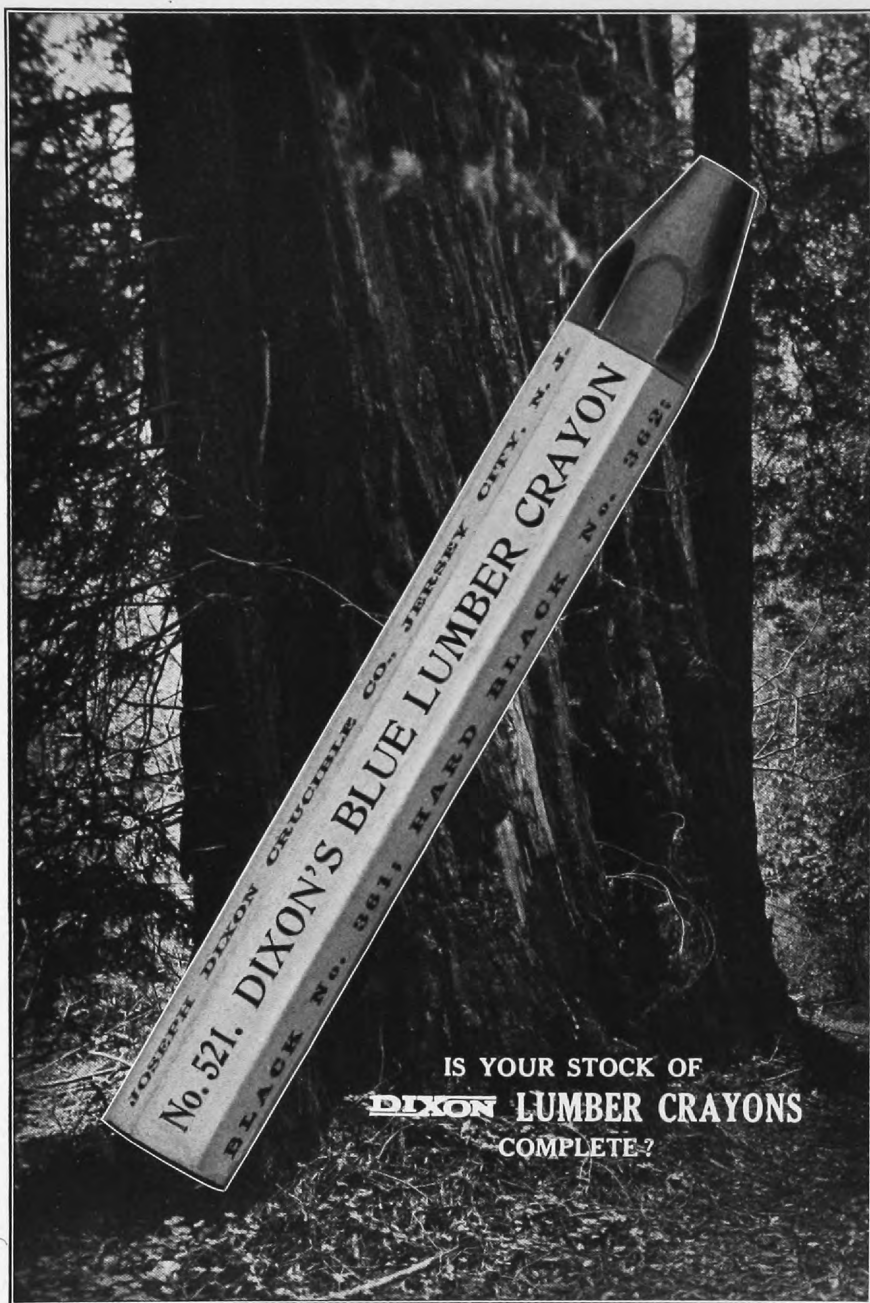
The De Vinne Press have had a successful career for over fifty years. The Joseph Dixon Crucible Company have been in business almost ninety-four years. These two concerns have worked one with the other for a half-century, and the prestige which we feel they both enjoy guarantees to their patrons honesty in business practices, quality of goods, and prices.

It is the real prestige which makes it a pleasure for us and makes us want to do business with a house like The De Vinne Press.

We extend to The De Vinne Press the wish that the prestige which they enjoy with all whom they have dealings will continue.



HE that sets himself to please may easily succeed.

A large, oversized Dixon's Blue Lumber Crayon is the central focus, leaning diagonally against a tree trunk in a dark, wooded setting. The crayon is light-colored with dark text. The text on the crayon includes "JOSEPH DIXON ORIGINATOR CO. JERSEY CITY, N. J." at the top, "No. 521. DIXON'S BLUE LUMBER CRAYON" in large letters, and "BLACK No. 381, HARD BLACK No. 382" at the bottom. The background is a dense forest with trees and foliage.

JOSEPH DIXON ORIGINATOR CO. JERSEY CITY, N. J.

No. 521. DIXON'S BLUE LUMBER CRAYON

BLACK No. 381, HARD BLACK No. 382

IS YOUR STOCK OF
DIXON LUMBER CRAYONS
COMPLETE?

The Guide Post



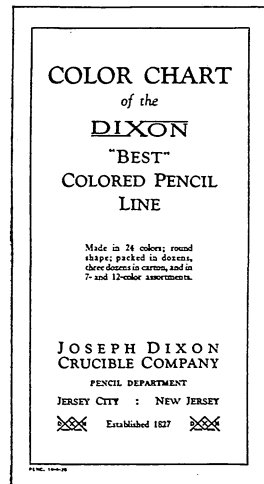
THESE are days which try the soul of the salesman. Going from town to town, from customer to customer, he is swimming against the tide in a sea of suggestion of evil. He must have a happy heart to go all the day. And his nights bring him no release, because then he sits down to write out reports, which tell only too often his failure to take orders. Only yesterday, he was the monarch of all he surveyed. But now, as he makes his rounds, none are so poor as to do him reverence. Let him not be down in the mouth. The tide is even now on the turn. Soon he will be riding along on the crest of another wave of prosperity, which he will have helped to bring about by his own perseverance as a spreader of the gospel of thinking and speaking and acting in a hopeful spirit during the days of depression in business.

One of the little things which the salesman tries to have absolutely perfect is his lead pencil. It must be dependable. When he writes an order he must be certain that it will not break, no matter how hard or how fast he writes with it. We have given special attention to the salesman's lead pencil. The one which we recommend for most salesmen is

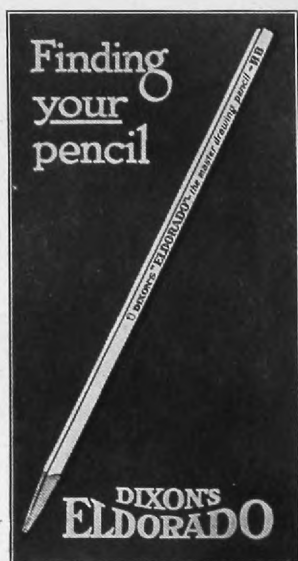
Dixon's Eldorado, "the master drawing pencil," containing a 2-H lead. This makes handwriting clear as to color, even with little pressure. It does not tear the paper of an order-book easily. The point holds up long. Where a number of copies must be made, it is of just the right degree of hardness. Not only so, but it is smooth and easy writing.

Any salesman, or saleswoman, who, reading this brief article, wishes to try out Dixon's Eldorado, containing a 2-H lead, need only send us his name and address, mentioning this offer, and we will send him a sample, and a copy of "Finding Your Pencil."

DIXON Dealer Aid



FOLDER showing twenty-four colors of DIXON "BEST" COLORED PENCILS for mailing in envelope $6\frac{7}{16}$ " wide \times $3\frac{9}{16}$ " deep (size used in ordinary business correspondence). Can be furnished with imprint of dealer.



BOOKLET "FINDING YOUR PENCIL," $3\frac{3}{16}$ " wide \times $6\frac{1}{8}$ " deep (to fit ordinary envelope) advertising DIXON'S ELDORADO — "the master drawing pencil." Designed for all who sell and use pencils.

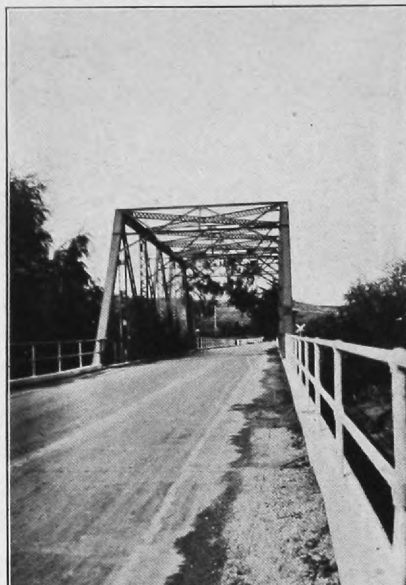
Dixon's Graphite Brake Cylinder Lubricant

THIS lubricant has been adopted by many of the leading railroads and is endorsed by prominent air-brake officials.

Unlike some lubricants, it will not hold moisture, and thus protects the metal against corrosion. It positively prevents undesired quick action of brakes, because it guarantees smooth, free operation of all parts. Cold will not cause it to become stiff and hard, nor will tropical heat melt it.

This grease is for triple valves (except slide valves), brake cylinders,

angle cocks, and locomotive brake valves. It can be used equally well for leather and composition packing cups in the brake cylinders. If leathers are air-tight when Dixon's is applied, they will remain so.



Bridge

San Luis Obispo, Cal.

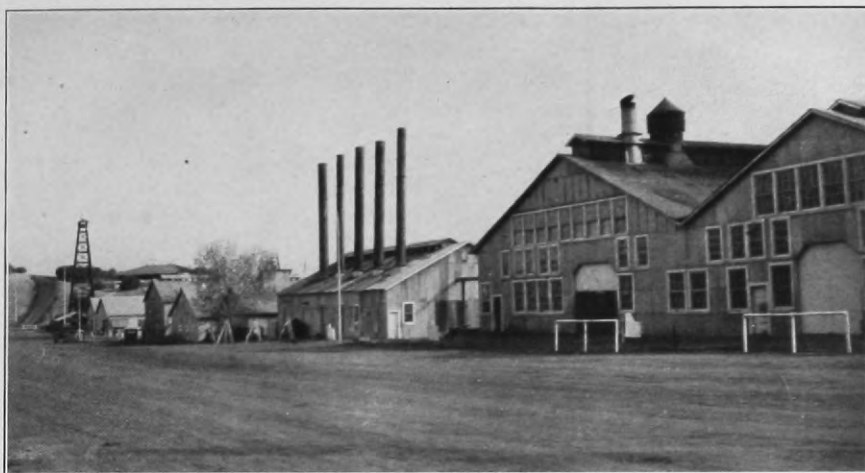
THIS bridge in beautiful California is painted with Dixon's Silica-Graphite Paint. The structure is exposed to heat, dampness, and other climatic conditions.

The bridge is on the main coast highway, between San Francisco and Los Angeles.

◆

TIM: "I've got to work hard next year."

TAM: "Why, aren't you coming back to college?"—*Gargoyle*.



Shell Company Coalinga, Cal.

THE above plant, owned by the Shell Company of California, is protected with Dixon's Silica-Graphite Paint. For extensive work and inexpensive cost of protection, use Dixon's.

The best people in California use it.

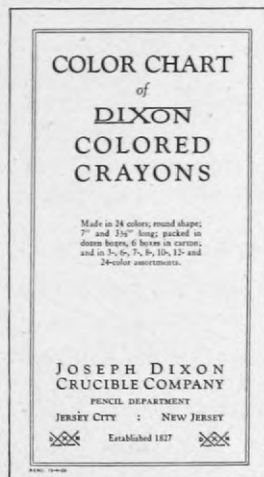
Dixon's Graphite Rack Grease

FOR greasing the racks of ferry slips nothing is more satisfactory than Dixon's Graphite Rack Grease. It is a grease of considerable body, very adhesive, and is not affected by the water. On account of its durability and the superior protection given to the racks by the graphite, this grease is more economical to use than less expensive greases.



THE nearer you get to greatness the smaller it appears.

DIXON Dealer Aid



FOLDER showing twenty-four colors of DIXON COLORED CRAYONS for mailing in envelope $6\frac{7}{16}$ " wide \times $3\frac{9}{16}$ " deep (size used for ordinary business correspondence). Can be furnished with imprint of dealer.

Since 1827

When Joseph Dixon made the first successful "black lead" crucible, Dixon Crucibles have maintained a standard of efficiency and quality that has kept them in the lead. The accumulated knowledge of nearly a century of crucible manufacture is woven into the walls of every Dixon Crucible.



DIXON CRUCIBLES

Satisfactory crucible service for every metallurgical requirement is assured when DIXON'S are used.

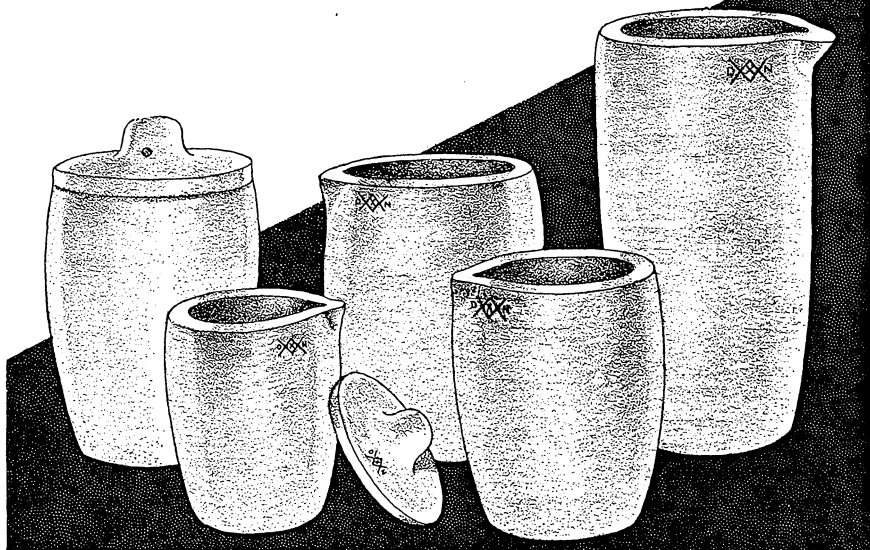
Large or small, DIXON CRUCIBLES are uniform in composition, construction and performance. You can rely on them because the experience gained through ninety-two years of crucible-making stands back of every one.

There need be no worry about crucible trouble in the middle of a melting operation if the crucible you use bears the name DIXON.

Write for Booklet No. 190-A.

JOSEPH DIXON CRUCIBLE CO.

Jersey City, N. J., U.S.A.
Est. 1827



Casting Shop and Melting Room Equipment

By EQUIPMENT ENGINEER

THE selection of a process for the casting and melting of non-ferrous metals, particularly brass and copper alloys, necessitates careful consideration of some obscure but very important factors. It is not uncommon to find that prejudice in favor of a certain method or of equipment is allowed to govern the selection with the result that the operations, expansion and development of the business as a whole are hampered. This is true not only of melting and casting but of many other operations. For example, a furnace may be selected because it saves labor or uses cheaper fuel, or is more "efficient," without consideration being given to the question of whether the best possible quality of product can be obtained, whether expansion of the business will be limited and if developments in the way of new products will be hindered.

The outstanding difference between English and American practice is that American mills are well equipped to turn out large production at low cost. English mills are operated at slower speeds, smaller units are employed, and there is specialization of equipment rather than standardization. The result is that while English costs are relatively higher and production less they can give more attention to detail, produce greater variety of products and can handle small orders much more economically than can most American mills. This flexibility or elasticity (*i.e.*, the number of different products that can be produced by the same equipment) is a most valuable feature of the business and is to be considered as one of the factors governing the selection of equipment.

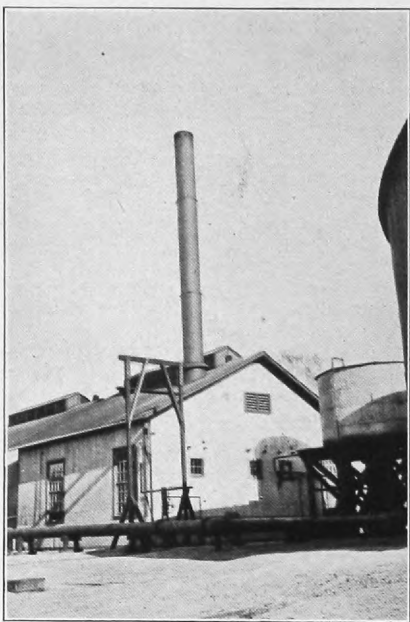
Obviously the crucible process of melting brass and copper alloys affords the greatest possible flexibility in the point of number of different alloys that can be produced at the same time with exactly the same equipment. For instance, with one set of ten pit fires, representing an investment of approximately \$2,000, copper, brass, bronze, nickel alloys, etc., can be melted at the same time and with an average production per 10-hour day of 8,500 lbs. With a type of electric furnace that will melt the same variety of products that can be made in the crucible, and representing an investment of about \$10,000, an average production of 10,000 lbs. per 10-hour day may

be expected, but the variety of alloys that can be made at the same time is greatly limited and in order to keep the melted cost within reason, lots of at least 1,000 lbs. must be handled.

In considering the installation of the crucible process the idea seems to obtain universally that coal pit fires must be used with the accompanying rather high labor costs, ash treating plant, heat and hard work. It is fair to say that gas fired crucible practice offers more general all around advantages than any other method of melting. On very large production of standardized alloys it is probable that the application of electricity with a good furnace would show greater economies, but for the flexibility required in the average brass mill casting shop or foundry and for miscellaneous work, gas fired crucible furnaces are eminently satisfactory. Lower labor costs result from the elimination of coal handlers, firemen, ash handlers, and the fact that the spilled metal falls into a clean pit does away with the necessity for ash treating, etc. There are further economies resulting from faster melting, less wear and tear on crucibles and better control over the heats. In fact, all the well recognized advantages of the crucible process are retained with less than half its disadvantages.

The real difficulty in selecting equipment of this kind lies in getting accurate knowledge of all the factors involved. Once these are known, and their relative importance determined, the selection of a furnace, fuel or process is comparatively simple. Comparative cost figures showing the cost of casting with one type of installation as against another, are not the only item of value. For instance, it may be stated that casting costs in one plant average 1½ cents per pound with a coal fired crucible outfit, while in another plant they are 1 cent a pound with an electric installation. Such a comparison does not by any means take into consideration all the factors involved; the relation of the casting shop or melting department to the rest of the plant equipment and the handling of the product, the requirements of the business and the development of new lines, the attitude of the plant organization. All of these are important and should certainly not be neglected.

It cannot be urged too strongly upon prospective purchasers of equipment for melting and casting, that the decision should be based upon the combined opinions of the metallurgist, engineer and production chief, with due consideration being given to the possible effect on the business policy.—*Metal Industry.*



**Pump Station, Associated
Pipe Line Co.,**
"Star Station," Star, Cal.

THE smoke-stacks, heater tanks, pipes, and other metal-work around this plant are protected with Dixon's Silica-Graphite Paint, as the illustration shows. If you have paint problems, please write us.

◆
DIXON FLAKE LUBRICATING GRAPHITE—Valuable as a lubricant for cylinders, valves, and bearings, either alone or mixed with oils. For coating gaskets and packing.

◆
Common Complaint
"DEMOCRATS Need Money."—Headline. And a lot of Republicans, Socialists, and Prohibitionists are in the same fix.—*Columbus Dispatch.*



This Booklet Free

THE above illustration shows the booklet "Useful Spanish Words and Phrases," which we will be glad to send free to those requesting it.

This booklet is prepared especially for travelers' use and contains words and phrases most likely to be used in traveling from point to point in Spanish-speaking countries.

It will also prove of use in Spanish classes.

Write to-day for your copy.

◆
DIXON CENTERPLATE GREASE—For lubricating center-plates and side bearings of railway cars it is most valuable. Makes train flexible and prolongs life of wheels.



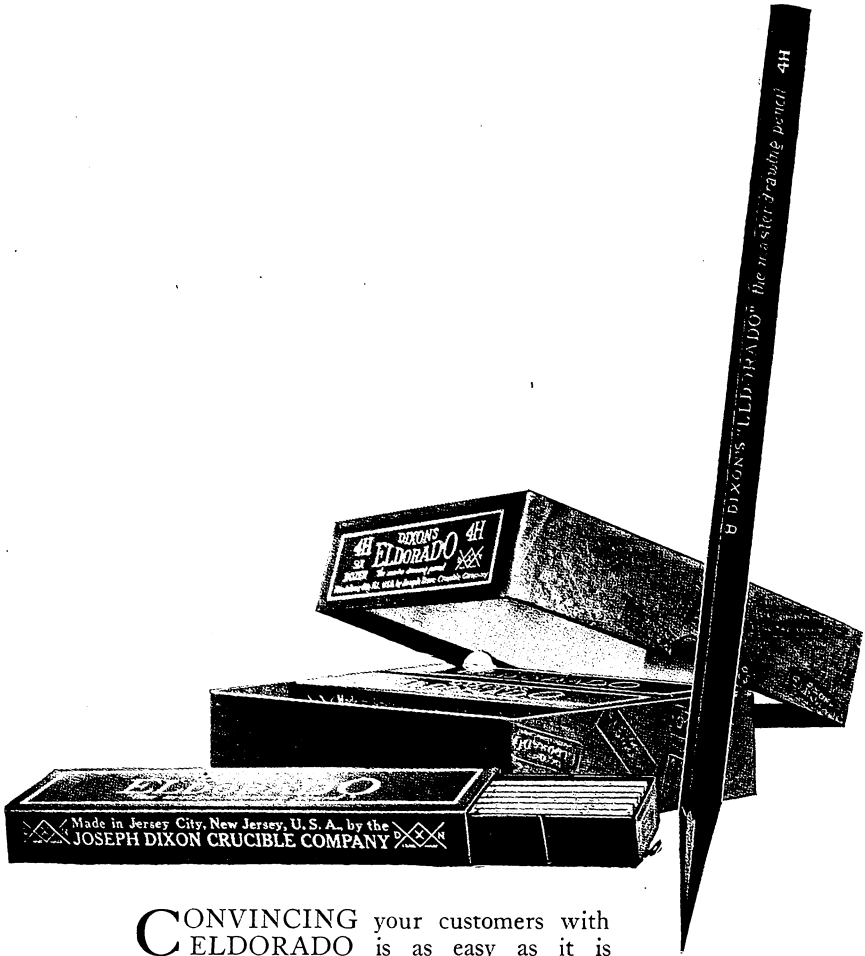
Accessory Exhibit, M. & M. Co., Cleveland, Ohio

THE above illustration shows the Dixon Booth at the Accessory Exhibit held by the M. & M. Co., Cleveland, Ohio, from January 22d to 29th. The exhibit occupied the entire second floor and there were over 100 other manufacturers represented. The gentleman standing is Mr. M. D. Pettingale, manager of the M. & M. Co.'s Cleveland store, and the gentleman sitting is Mr. R. Rochefort, the Dixon representative in that territory.

We are advised by Mr. Brown, Sales Manager, that the M. & M. Co. have increased their

business on Dixon's Automobile Lubricants by leaps and bounds, and also that their entire force are Dixon boosters, due to the co-operation given them by the Dixon Company through Mr. Rochefort.

Needless to say, this is more than pleasing to us. It is evidence of the spirit of co-operation always present in the Dixon Company and salesmen. Other dealers can well profit by the example of the M. & M. Co., and take advantage of our desire to help. It will be repaid in larger sales.



CONVINCING your customers with
ELDERADO is as easy as it is
profitable.

The first touch of its responsive lead to
paper is decisive.

And *its* quality creates in your customers
a frame of mind favorable to the purchase
of other merchandise of quality which you
carry.

DIXON'S ELDERADO

"the master drawing pencil"



Dixon's "Best" Col-
ored Pencils occupy
the same position of
leadership as Dixon's
"Eldorado." They,
too, are supreme in
their field.

JOSEPH DIXON CRUCIBLE CO., PENCIL DEPT. 190-J, JERSEY CITY, N. J.
Canadian Distributors:—A. R. MacDougall & Co., Ltd., Toronto

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Graphite

VOL. XXIII

APRIL

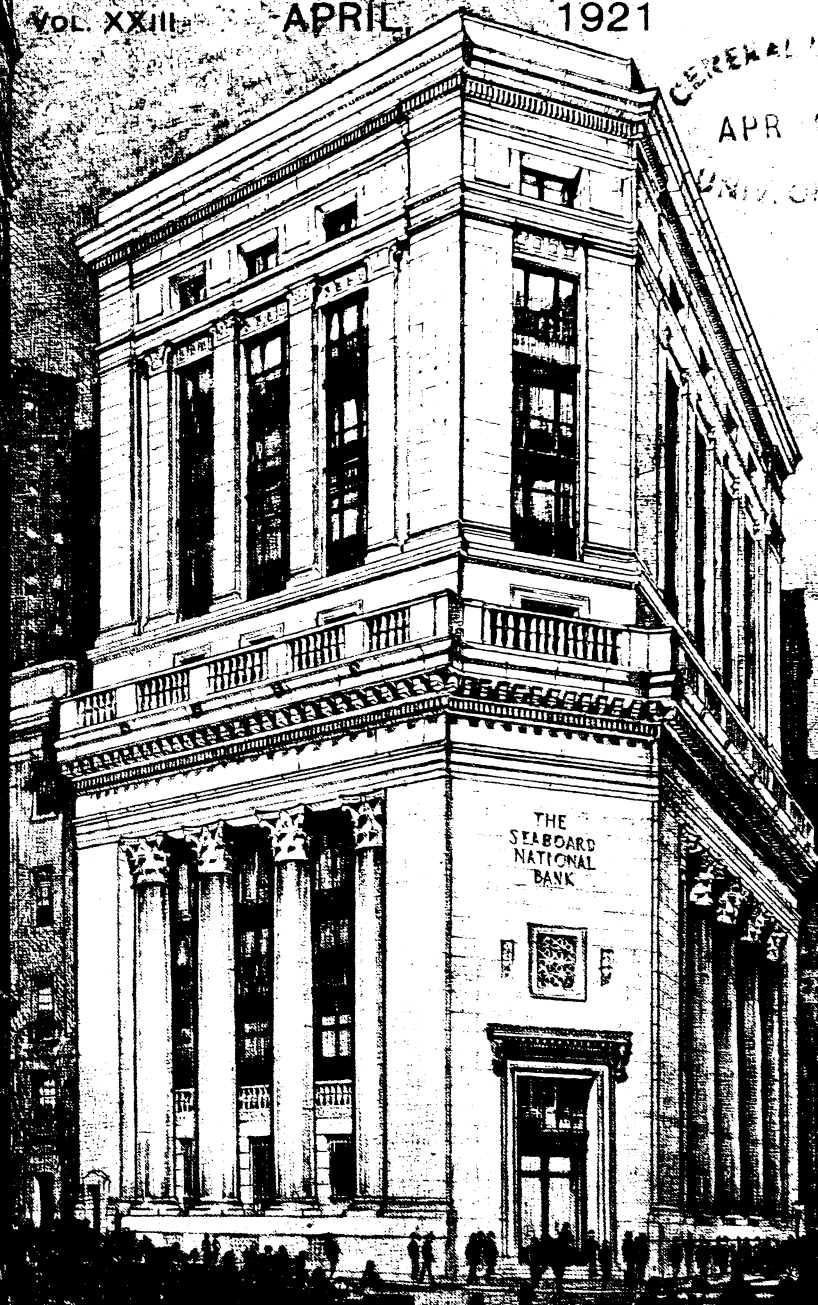
1921

No. 4

CEREAL MARK

APR 10 1921

UNIV. OF CALIF.



JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



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Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

APRIL, 1921

Number 4

The Need for Salesmanship

THERE was a time when one of this country's proudest boasts was its salesmanship. We studied it, developed it, and made it an art, for the successful practice of which no effort was too great. Then came the war and salesmanship went into a decline.

War's demands and the money which war put into circulation made the selling of goods so easy that salesmen became mere order takers. As demands grew and the supply lessened it was no longer necessary even to go out and take orders. Men sat in their offices and the orders rolled in so heavily that buyers, in many cases, had to beg consideration of their needs, and took it as a personal favor if they got it.

There is no condition so much relished by business as a rising market, and for months the market in this country rose daily. Anything went and at any price. Apparently there was no limit to the buying public's desires or its ability to pay.

And then, more suddenly even than it had risen, the wave of buy-

ing receded; the period of readjustment began. The thing which many salesmen had assured themselves could not happen did happen—prices began to slump.

That should have been the signal for the revival of the art of salesmanship. That was the time to get out into the market again, to study the situation, and to adopt new policies to meet it. But did this happen? The answer will be found in a score of industries and the answer is "No!"

Instead of digging out of his office to build up new business, the salesman has dug himself in and hung crape on the door. He has taken the attitude that because business no longer comes to him there is no business; that because the public is not buying it cannot be persuaded to buy. All of which is simple nonsense.

The way to get business is to make business. The way to revive buying is to revive selling. And the time to do it is now. Not January 1! Not next spring! Not next summer, but now!

The United States is neither dead

nor defunct. It is functioning normally and it has a huge share of the world's gold with which to do business. But the workman cannot labor and the manufacturer cannot produce until the salesman begins to sell goods.

It cannot always be harvest time. There must always come a day when the crops are in and the profits counted. And when that day comes the only way to assure another crop is to get to work and cultivate one. —Extract from the *Dearborn Independent*.

Seaboard National Bank Building

Broad and Beaver Streets, New York City

THIS handsome new structure shown on our cover is of Roman classic design.

The architect is Mr. Alfred C. Bossom; fabricators, Bethlehem Steel Co.; erectors, Post & McCord; general contractors, C. T. Wills, Inc.

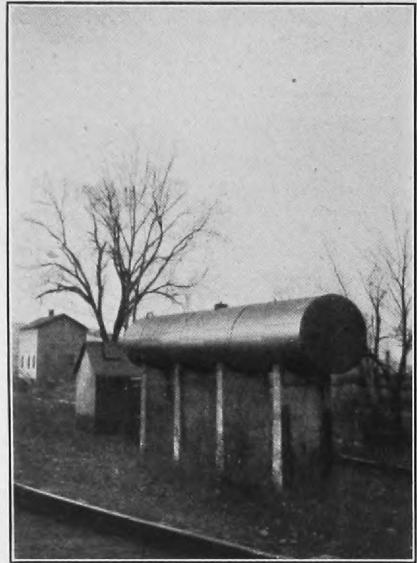
The five judges of the Downtown New York League of Architects and Owners chose Mr. Bossom's design as the finest building erected in downtown New York in 1920. This is notable praise, and we offer our hearty congratulations to architect and owner. The points were: architecture, structural excellence, adaptability, economy of ground space.

The 700 tons of steel are protected with Dixon's Silica-Graphite Paint, Dixon's Dark Red having been used for shop coat and Dixon's Black for field coat.

The President of the Seaboard National Bank is Mr. Samuel G. Bayne, under whose management

great progress has been made in financing our foreign trade, etc. Deposits over \$66,000,000, surplus \$4,000,000, certainly a great bank financially and a handsome bank architecturally.

Dixon's Silica-Graphite Paint is used to protect the steel work of notable buildings like this in the world's great cities.



Oil House and Tank

Village of Canajoharie, N. Y.

EVERYWHERE Dixon's Silica-Graphite Paint is giving service like this. No condition of hard service, sun, cold, dampness, heat, is too hard for Dixon's, the popular, the sure-server, the economical protective paint.

Pool

"WHAT'S your idea of clean sport?"
"Swimming."—*Orange Peel*.



Viaduct, Philadelphia & West Chester Traction Co., Llanerch, Pa.

Five Years' Paint Service

FAR into the distance goes this excellently built and well maintained structure. *Far into time* goes the service of Dixon's Silica-Graphite Paint, which already has given five years' service on this steel viaduct.

Mr. A. E. Garwood is Superintendent Maintenance of Way, of this system, and *far into the world of scientific experience and economy* goes his wisdom.

When conservatively progressive men like Mr. Garwood make a decision, it is well worth following by all engineers who have similar paint problems.

Dixon's costs least per year of service. If that fact burns into your mind, rust will not burn into the

metalwork you desire to properly and economically protect.

Like enamel on your tooth, Dixon's takes care of the *outside*, so that the inside of the metal takes care of itself. Dixon is not a dentist, but this dentistry metaphor will give you the "Dixon idea."

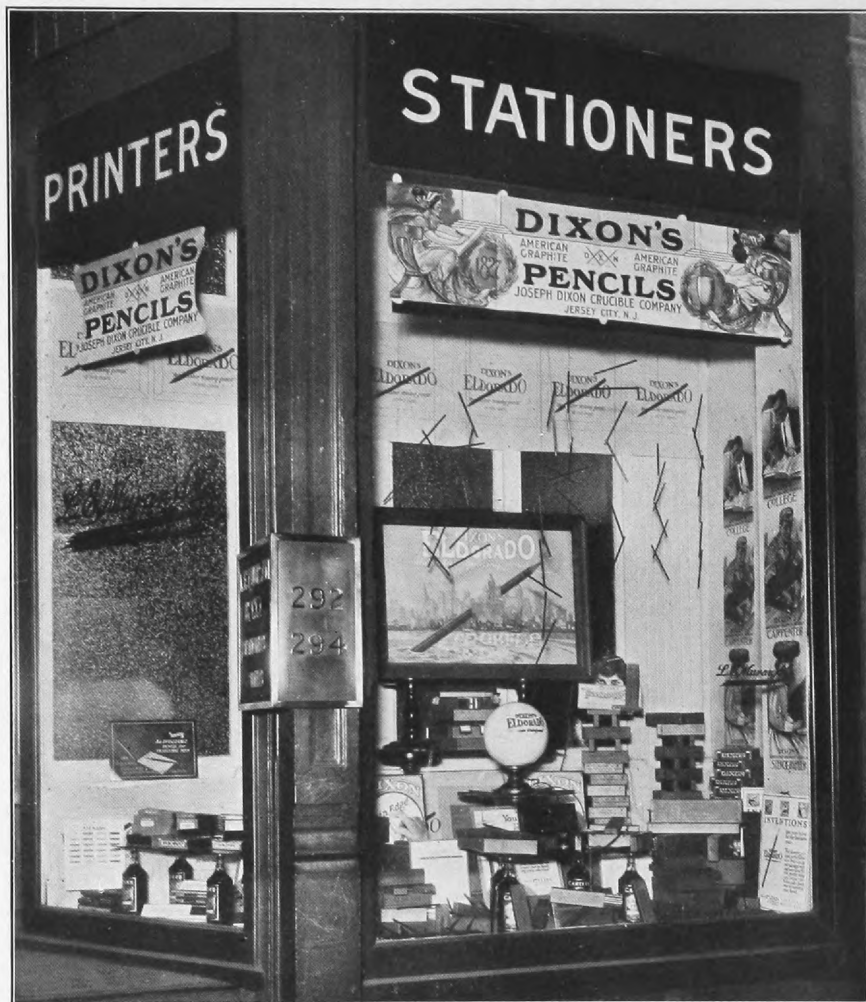
The Law of Prosperity

WE read that the law of prosperity is being absolutely faithful to the situation in which you are at present placed. If you are not faithful to it, then the chances are that it will not be the stepping-stone to something better, but to something poorer. If you are faithful to it, the time may soon come when you will be glad and thankful.

When apparent adversity comes be not cast down by it, but make the best of it, and always look forward to other things, for conditions more prosperous.

Dixon Display in Window of L. E. Muran & Co. Boston, Mass.

Wanted: a camera that will see a window display as you want it to be seen, so that the reproduction may do some justice to the subject.



WE did not see the display of Dixon Pencils and Erasers in the window of L. E. Muran & Co., 292-294 Devonshire St., Boston, but

our Mr. H. B. Van Dorn, Jr., did, and we will let him tell the story:

"The Dixon Line was featured in considerable variety in a window in-

tended for close-up inspection, so the photograph does not show the detail to advantage.

"In the foreground of the window one little feature shows a full dozen box of ELDORADO pencils dangling at the end of a horizontally placed $3\frac{1}{2}$ inch point of an ELDORADO HB, to indicate the extreme strength of the lead in this grade.

"This store at 292-294 Devonshire St. was bought by Mr. Muran from Mr. E. A. Hammond in 1920. The store has been entirely renovated and a new front put in to accommodate the combined business of E. A. Hammond and L. E. Muran, under the firm name of L. E. Muran & Co.

"Mr. Muran started in the stationery business in Boston in 1894, a stranger in a strange land, but with an alert brain, strong physique, and unconquerable spirit. His business has grown to large proportions. Only this last year he bought the old established Hammond business that had been a factor in the Boston trade since 1871.

"Mr. Muran holds the opinion that while such a window display featuring quality, quantity, and variety of one staple is not necessarily the most effective window for immediate or large sales, yet it shows his goodwill toward a manufacturer and his commendation to the public of the quality of his merchandise. It helps to identify him as a distributor of a standard line, so that when a Bostonian is in need of the article that he has noticed in passing, he will remember where he can buy it conveniently."



Herbert L. Hewson

EFFECTIVE on March 1, 1921, Mr. Herbert L. Hewson has been placed in charge, as special representative, of the sale of our crucible factory products in Ohio, southern peninsula of Michigan, Pittsburg, and adjacent cities and towns. He will be aided by able assistants and will be in touch with any part of this territory on short notice.

Mr. Hewson first became associated with the Dixon Company in 1909 and was at that time connected with our San Francisco office. During the twelve years of his association, Mr. Hewson has represented the Dixon Company at home and abroad in various capacities. He is equally familiar with all Dixon products.

In this undertaking, Mr. Hewson has the full confidence of the Dixon Company and he will render every service possible to our customers.

Transmission Efficiencies

THE following letter appeared in a recent issue of *Automotive Industries*, and it will no doubt be of interest to readers of GRAPHITE.

EDITOR AUTOMOTIVE INDUSTRIES:

The writer was very much interested in reading the above editorial, which appeared in the January 6th issue of your paper.

The writer has been conducting extensive tests in the laboratories of the Joseph Dixon Crucible Co. with truck transmissions to determine the efficiencies of various lubricants, and the results obtained have been such as to confirm the results described in the paper recently presented to the American Society of Mechanical Engineers.

The tests conducted by the writer were such as to preclude, as much as possible, any errors in observation, since each test was repeated several times, and both the electrical and mechanical readings were employed as a counter-check.

Two different types of transmission were used in the tests conducted by the writer—one, a heavy truck type, which was apparently identical with the one described in the A. S. M. E. tests. This transmission is of a conventional design, with the constantly meshed gears located at the forward end of the transmission and the secondary shaft is arranged in the same horizontal plane as the primary shaft. The other transmission tested by the writer was a lighter truck type, with the constantly meshed gears also at the forward end, but with the secondary shaft below the primary shaft.

It was demonstrated in both cases that the direct drive is slightly less efficient than any of the lower gears, whether the secondary shaft is located in the same horizontal or the same vertical plane with the primary shaft. The difference, as may be expected, was slightly more pronounced in the two shafts in the same horizontal plane, but it was very clearly demonstrated that the greatest proportion of the power losses is due to the churning of the lubricant.

It is, of course, evident that the churning effect of the secondary shaft is identical whether running in direct drive or in low gear, but the fact that the remaining gears of the primary shaft, except the constantly meshed gear, are running at lower speeds when in low gear, will readily account for a difference in the churning effect. This is due to the fact that all the gears of the primary shaft are running submerged in the lubricant to about one-third of their circumference, since the normal filling of the transmission case has to be approximately to a level flush with the underside of the primary shaft. If the level of one lubricant is below this line, it would be difficult to properly lubricate the anti-friction bearings employed.

In order to check the perhaps unexpected results of the extraordinarily high power losses, due to oil churning, a number of very interesting experiments were conducted by the writer with the lubricant drained from the transmission with sufficient lubricant clinging to gear teeth and bearings to prevent damage during the test runs. The results obtained showed very clearly that the power losses under these conditions were only a small fraction of those run with the case filled with oil. The data obtained, together with those of other tests, have made it possible to determine fairly accurately the effects of the different elements which contribute to the power losses in an automobile transmission.

The value of the test observations was enhanced by the fact that test runs were made at different temperatures, and, as was to be expected, the effect of the churning resistance of the lubricant at lower temperatures was particularly noticeable.

The writer feels that it would be of interest to you to be informed at this time of the results of his tests, which will be presented to the Engineering Fraternity in complete form as soon as some final check tests have been completed and the very extensive material has been properly digested and interpreted.

(Continued on page 4894)



Dixon Exhibit—Fifth Annual Pacific Automobile Show

San Francisco, February 19-26, 1921

ALL during the week of February 19th the big Exposition Auditorium in which was held the Fifth Annual Pacific Automobile Show was filled with a keenly interested crowd that came to see—and for the most part, to buy—new automobiles.

The largest event of the whole show week was the Motor Car Dealers' Association Banquet. It was attended by over 500 guests representing the entire industry.

The above illustration shows the Dixon exhibit at this show, the most interesting part of which was the well-known Dixon Transmission

Cases filled with No. 677. By means of these gear cases the Dixon representatives were able to prove to car owners the fact that Dixon's Gear Lubricant No. 677 clings to the gears at all times, even when the gears are idle.

Judging from the interest shown in these cases and the lubrication charts distributed, owners will pay a great deal more attention to the important subject of proper gear lubrication during the coming year. It is well, for then the service rendered by their cars will be increased ten-fold.

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

*In the interests of Dixon's Graphite Pro-
ductions, including Crucibles, Lubricants,
Pencils, Paint, etc. Sent free upon request.*

Vol. XXIII APRIL, 1921 No. 4

Fear

RALPH WALDO TRINE tells us that fear and lack of faith go hand in hand. The one is born of the other. Fear is a most expensive guest to entertain, the same as worry is; so expensive are they that no one can afford to entertain them.

"The fault, Dear Brutus, is not in our stars, but in ourselves, that we are underlings."

An old French proverb runs:

"Some of your griefs you have cured,
And the sharpest you have survived;
But what *torments of pain* you en-
dured

From evils that never arrived."

Fear can paralyze every muscle of the body. Fear affects the flow of the blood, likewise the normal and healthy action of all the forces of life. Fear can make the body rigid, motionless, and powerless to move.

We are not born to fear; we acquire fear.



Appreciative

A DASH of winter now and then is relished by the coal-yard men.—*Boston Transcript*.

A Peptimist

THE peptimist is the one who works with most exceeding vim, And sets example to the shirks who may keep tab on him.

So many men, with dragging feet, go to their tasks each day,

With frowns they shuck the ears of wheat and thrash the bales of hay.

With scowls they ply the shining saw or wield the useful churn,

They're only happy when they draw the pay they think they earn.

And when there is a slump in trade, and workmen must be fired,

These delegates are first to fade—they've made the bosses tired.

The peptimist has taken pride in labors safe and sane,

Whatever tool he may have plied, a cork-screw or a plane.

He did not go with dragging steps when morning whistles blew.

In every motion there was pep, no sulky fits he threw.

And when a slump in trade appears, and workmen are laid off,

The boss announces, through his tears, "We'll keep the hustling toff.

We can't afford to let him go, he's such a useful man,

We'll keep him, though to Tom and Joe we must attach the can."

The peptimist is in demand wherever commerce dwells,

He makes his progress through the land, and wears a string of bells.

—*Ohio State Journal*.

Dixon's Worm Gear Oil No. 675

This is a heavy oil prepared for worm drive lubrication.

It readily follows worm and gear, leaving a smooth, enduring film.

It clings to the worm equally well when under heavy load and when the truck is idle.

It prevents generation of excessive heat otherwise present due to metallic contact of tooth surfaces where subjected to heavy worm loads.

It counteracts the abrasive action of road dust, metal particles and other foreign substances.

It is an enduring lubricant that retains its effectiveness after extensive use.

It prolongs the life of the truck by increasing the life of one of its hardest working parts.

How Dixon's No. 675 functions will be explained in detail upon request.

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

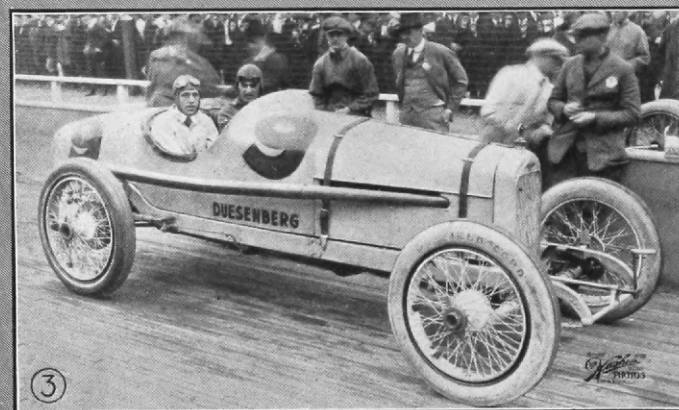
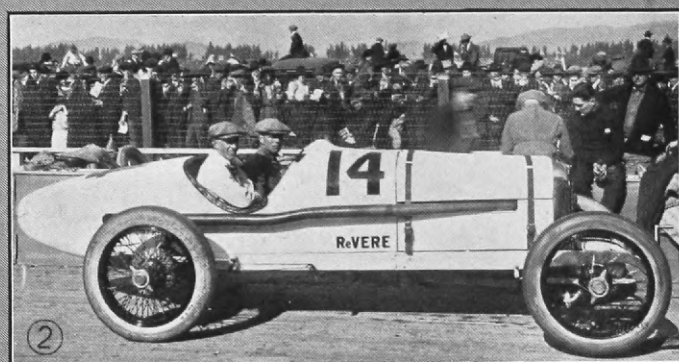
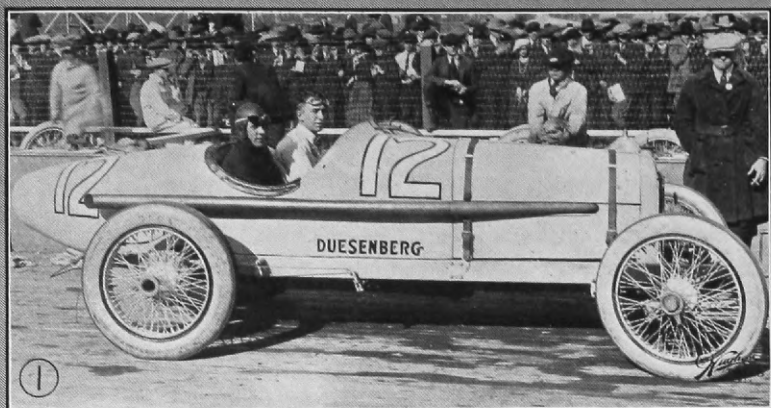


Makers of Quality Lubricants - Established 1827



*For Spur and Bevel Gears
Use DIXON'S No. 677 Gear Lubricant*

Graphite



Dixon Pit and Some of the Drivers, Los Angeles



s Angeles Speedway, February 27, 1921.

Opening the 1921 Racing Season

Los Angeles Speedway, Feb. 27, 1921

THE 1921 racing season was opened at the track of the Los Angeles Speedway Association on February 27, 1921.

The illustrations on the center spread of this issue show the Dixon pit and several of the drivers who competed that day. The illustrations are explained as follows: 1—Jimmy Murphy; 2—Eddie Hearne; 3—Ira Vail; 4—Roscoe Sarles; 5—Dixon pit and lubricants for drivers.

The racing cars with but one exception were Dixonized throughout, and following is what a few of these drivers have to say about the value of Dixon's Gear Lubricants. Space does not permit of the use of more testimonials.

"I have all the confidence in the world in Dixon's Automobile Lubricants, both for racing and touring cars."

JIMMY MURPHY.

"Say anything you like in my name in favor of Dixon's Automobile Lubricants. I am thoroughly convinced they are the best for racing and touring cars."

EDDIE HEARNE.

"Dixon's Automobile Lubricants are *all* you say they are, and *more*."

IRA VAIL.

"After an exhaustive test of other lubricants, I find Dixon's Automobile Lubricants to be far superior to any others, and I will use them in all of my future races."

ROSCOE SARLES.

The races consisted of four heats of 25 miles each and one final heat of 50 miles. The drivers in the final heat finished in the following order: 1st—Ralph De Palma; 2d—Tommy Milton; 3d—Roscoe Sarles; 4th—Jimmy Murphy; 5th—Ira Vail, and 6th—Eddie Miller. The car of Ralph De Palma was the only one which was not Dixonized.

Dixon's Automobile Lubricants prove just as enduring and valuable to the ordinary driver as to the racer. The fact that so many of the racing drivers of America use and recommend Dixon's is proof of their lubricating value.

Transmission Efficiencies

(Continued from page 4888)

I should appreciate very much to receive your advices as to contradictory results of previous experimental evidence, but I believe that such evidence is not very conclusive in view of the fact that the majority of previous transmission tests were not conducted under the strict scientific precautions which conclusive efficiency tests require.

It is the writer's opinion that a thorough examination of the present transmission designs will demonstrate very clearly that there is considerable room for improvement in the design of our present type transmissions, especially from the standpoint of satisfactory lubrication.

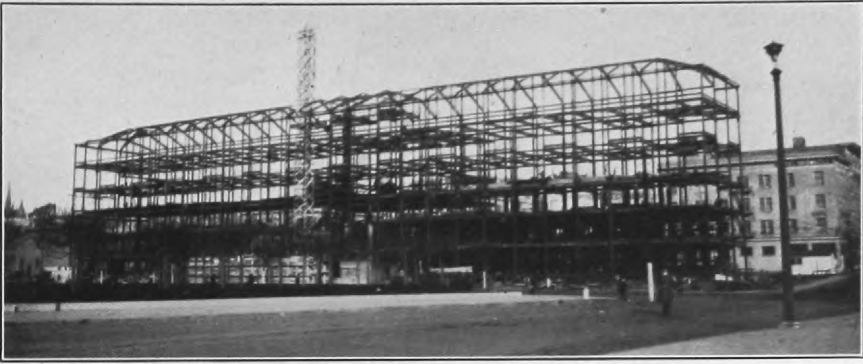
G. A. UNGAR.



Successful

"WERE you trying to catch that train, sir?" he asked pompously.

The panting would-be passenger eyed him balefully for a second before he hissed in reply: "Oh, no, I merely wanted to chase it out the station."—*The Arklight*.



"California State Building"

McAllister St., San Francisco, Cal.

THIS large building is being erected at the Civic Center, McAllister Street, San Francisco, at a cost of \$1,500,000.

The State Department of Engineering at Sacramento drew the plans for this handsome Italian-Romanesque structure. H. E. Parker & Company are the contractors. C. A. Blum, of San Francisco, painting contractors, used Dixon's Silica-Graphite Paint, as specified, on all structural steelwork, metal holders under the roof, flues, and other metalwork.

It is not often that the entire steel skeleton of a building is erected before any of the stone facing, concrete floors, walls, etc., are fixed in place. This photograph has, therefore, an educational value. It was taken by Mr. W. Shulman, representative of our San Francisco sales office.



Just One Thrill after Another

SOME of the movie actresses seem to have discovered the secret of perpetual emotion.—*The Black and Magenta* (New Concord, Ohio).

Two Kinds of Digging

GREAT material wealth has come from digging. Down through the centuries the remote parts of the earth have been searched and burrowed for gold and silver and precious stones, wealth in its most concentrated form. It is necessary, too, to dig that there may be harvests. Everywhere the fullness of the earth awaits the sons of men, but they must dig for it. And though the toil be great, the rewards are great.

But man's profitable digging is not confined to the work of his hands. Equally liberal rewards come from digging for ideas. This also is hard work—but it pays. The production of worth-while ideas seems to be confined to the few, while the many pass their days content with the ideas of yesterday. This is an inconsistency, when you think of it. Every head has a brain and his mind was given to man to be used, to be a means for his betterment. And even the poorest heads have some ideas worth developing, if they are dug for. The trouble is, most folks don't dig, at least not as often as they might.—*The Three Partners*.



DIXON'S ELDORADO

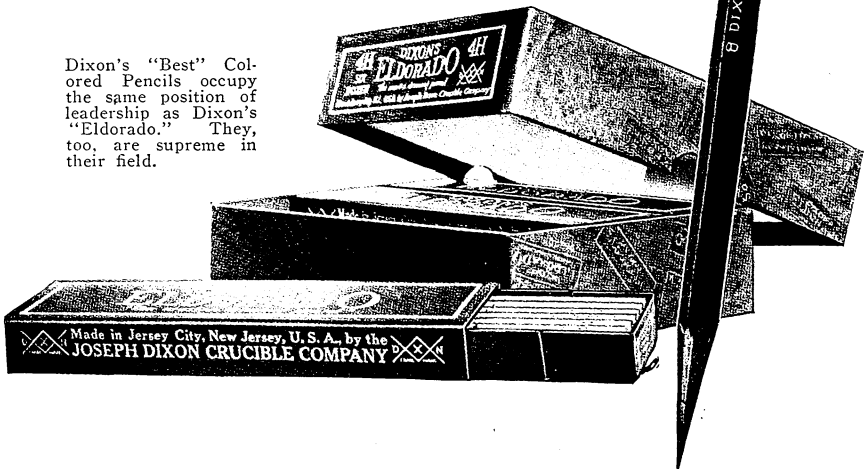
"the master drawing pencil"

THERE is always the opportunity in a full stock of ELDORADO to convince your hardest-to-satisfy customer that your service as stationer is at the peak of perfection.

You may depend on ELDORADO to teach your trade to depend on your judgment in pencils.

JOSEPH DIXON CRUCIBLE CO., PENCIL DEPT., 190-J, JERSEY CITY, N. J.
Canadian Distributors:—A. R. MacDougall & Co., Ltd., Toronto

Dixon's "Best" Colored Pencils occupy the same position of leadership as Dixon's "Eldorado." They, too, are supreme in their field.



"Guide Post"



THE flowers that bloom in the spring, tra la, are shyly peeping forth about this time of year hereabouts. Still, they have nothing to do with the case, tra la.

The case we refer to is a packing case.

It is a very prosy affair, and no flower that blooms in any garden, and no flower of speech we know of, could ever make it anything else.

The packing case is made to stand the gaff. You are expected to throw the hooks into the packing case at any stage of the proceedings. A real packing case takes such things as they come, making no moan about harsh treatment.

Frequently the packing case is left out all night, in all kinds of weather. But this really means nothing to a packing case, whether it is alone or in the company of others.

But there is one thing a self-respecting packing case always objects to. It does not like to be scrawled all over with writing hard to read, made by crayons unworthy the name.

Therefore, as all good shipping clerks are wishful of humoring the packing cases they handle, we respectfully ask all those who buy marking crayons for them that they investigate

the merits of the Dixon CARBON BLACK CRAYON No. 494.

It is a free, bold writing and marking crayon.

Its marks are not easily blurred or erased.

Its marks stand the rain as well as the sun.

Its strength is such that the man who uses the crayon comes to marvel at it.

Do not hesitate. We will send you a sample for the asking.

Remember,—Dixon CARBON BLACK CRAYON No. 494.

A remarkable marker.

Integrity

IN the world of things created, Integrity is enduring.

The Pyramids have been beaten upon by the hot sands of five thousand years. Their edges have crumbled, their sides are defaced, but still they stand, their Integrity untouched.

In the world of spirit, Integrity of character is ever the hallmark of greatness. Temptations to evade agreements, to cheapen quality, to place personal favor before impartial justice,—all these can beat steadily upon it, yet it will stand staunch and uncompromising.

Integrity is the measure of a business; compromise ever so little and honor is dimmed and reputation fades away.

—The De Vinne Press.

◆

TIM: "I've got to work hard next year."

TOM: "Why, aren't you coming back to college?"—*Gargoyle*.



County Bridges

Little Falls, N. Y.

THE above structures are protected with Dixon's Silica-Graphite Paint.

A county engineer is not like other men; he has to meet demands of three kinds of people: the critical taxpayer, the politician, and the comments of his own skilled profession.

Dixon's is used widely by county engineers, city engineers, and other municipal officials because it speaks for itself; the taxpayer knows he gets longer and more economical service; the engineer likes to erect a bridge that is worthy of his profession, and he likes to know absolutely that that bridge is protected by the surest and best paint made.



Imaginative Job

"MAUD's husband is the make-up man on a newspaper."

"I suppose his work is to make up those sensational stories they print. What a fascinating job!"—*Boston Transcript*.

Dixon Crucible the Best Ever Used

THE following letter from a Dixon crucible user speaks for itself:

"Spartanburg, S. C.

"You have asked me to make a report as to the quality of crucibles we bought of your firm more than a year ago.

"I find in looking over my heats for the past year that I have taken out one hundred and seventy-one (171) pots of brass with five crucibles. I used three No. 30's and two No. 50's. Two are in use yet, one No. 50 and one No. 30, and they are in fairly good condition.

"I have been using Dixon Crucibles for quite a while at different shops, and I consider them the best that I have ever used.

"W. R. DISEKER,

"With Suspension Bearing Co."



Dixon Booth, New York State Retail Hardware Exposition

Rochester, February 22 to 25, 1921

THE above illustration shows the Dixon exhibit at the New York State Retail Hardware Exposition held in Rochester from February 22 to 25, inclusive. This, the nineteenth annual convention, was marked by both the largest attendance and exhibition in its history. Six hundred and fifty representative hardware dealers registered and 178 exhibitors displayed their wares.

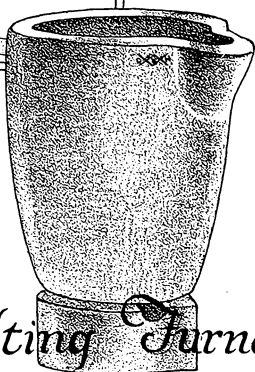
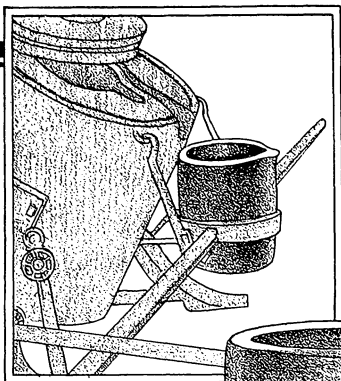
The following officers were elected for the ensuing year: Jay Brackett, Ilion, President; Henry C. Kelly, Canandaigua, First Vice-President; R. J. Atkinson, Brooklyn, Second

Vice-President; Frank E. Pelton, Herkimer, Treasurer; John B. Foley, Syracuse, Secretary.

Among the various Dixon products shown were silica-graphite paint, automobile lubricants, belt dressings, pencils, lumber crayons, stove polish, axle grease, and other products distributed by hardware dealers.

Keen interest in these products was shown by the many dealers who stopped at the Dixon booth.

◆
DIXON SILICA-GRAPHITE PAINT—For every class of railroad structures exposed to corrosion.



Tilting Furnace Crucibles

DIXON GRAPHITE CRUCIBLES

FOUNDRIES using Rockwell, Ideal, Hausfeld, Case, "M. R. V.," Monarch, or other tilting furnaces will find Dixon's Tilting Furnace Crucibles and Bases for same dependable and economical.

The name DIXON on any crucible gives assurance that it is *the standard* and is backed by nearly a century of experience in crucible manufacture.

Write for Booklet No. 190-A, in which are illustrated the full line of Dixon Graphite Crucibles, their sizes and capacities.

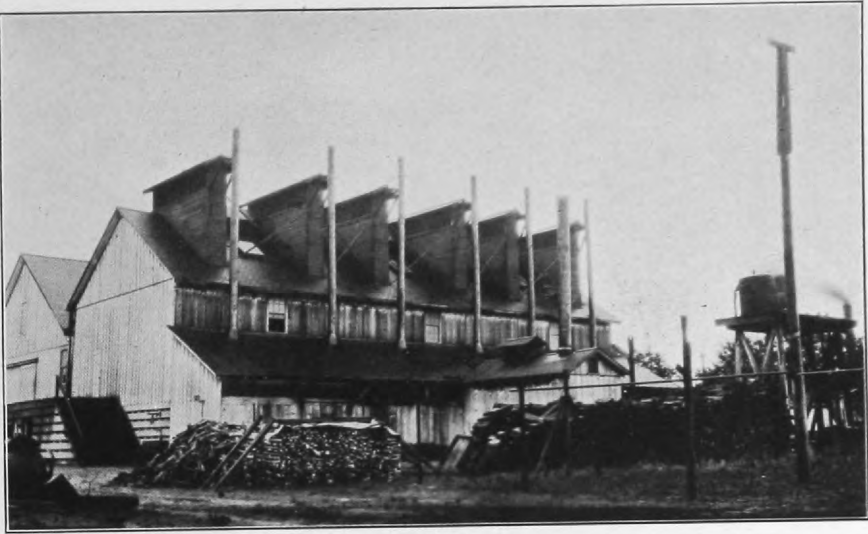
Joseph Dixon Crucible Co.



Jersey City, N. J., U. S. A.

Established 1827





Plant, Quong Sang Lung Co.

Watsonville, Cal.

THE sun came to California, and the Chinese followed the sun!

The apple-drying plant illustrated above is owned by the Quong Sang Lung Company of Watsonville, Cal. It is a modern structure, as the illustration shows.

The smoke-stacks, tanks, and other metal-work around this plant are also protected with this **LONGEST SERVICE** paint.

Dixon's Gear Lubricant No. 677

NO. 677 transmission and differential lubricant is a light-bodied lubricant whose consistency remains unchanged through a wide range of temperature. It is recommended for transmission and differential gears; except worm drives, where No. 675 should be used.

No. 677 flows freely over the gears when in operation, yet it will not squeeze out under heavy load, *nor run off the gears when idle*, as the average lubricant will do.

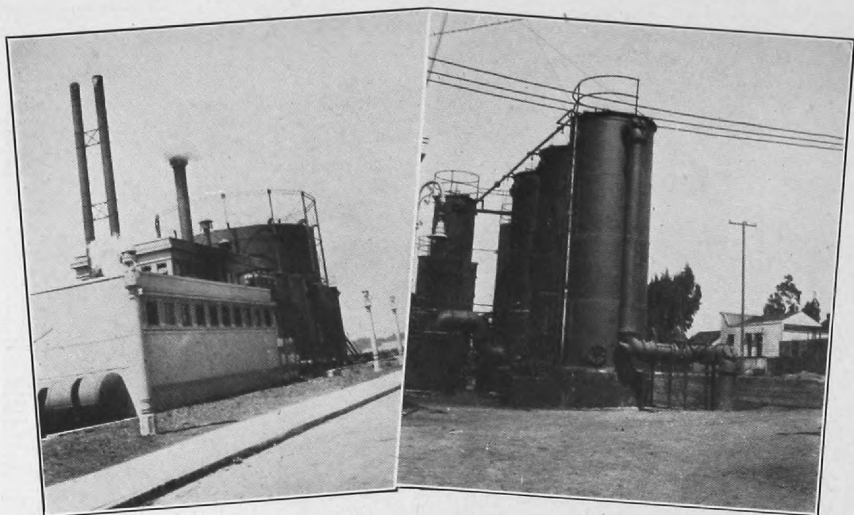
It will lower friction so that wear on bearings and gears is reduced to the minimum, and it will insure quietly running gears by providing a film of lubricant between gear teeth meshing with a minimum clearance.

No. 677 resists cold, permitting gears to shift as easily in freezing weather as in mid-summer, and it shows minimum power losses in hot and cold weather operation.

With its use a minimum temperature rise for gears and bearings is shown while the cutting action of road dust and metal particles is entirely "smothered."

These properties, because of the long life of Dixon's No. 677, are maintained unimpaired for a long period.

Write for Booklet No. 190-G.



Pacific Gas & Electric Co. Vallejo, Cal.

THE scrubbers, smoke-stacks, and other metal-work shown in the two illustrations are protected with Dixon's Silica-Graphite Paint, probably the most popular and certainly the most economical protective paint.

If you have not had experience with Dixon's Paint, write us for long service records and other details.

Dixon's Boiler Graphite

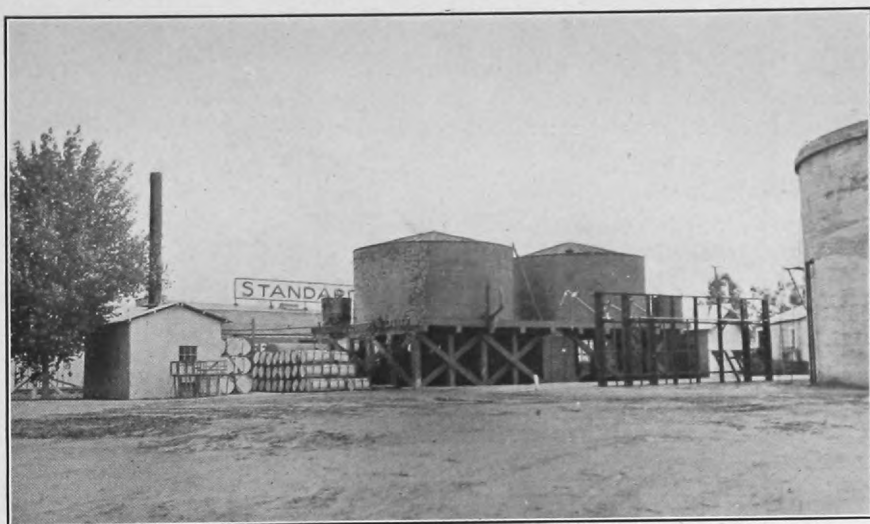
THE action of fine flake graphite in steam boiler drums and tubes is not chemical but purely mechanical. It does not dissolve the scale nor does it attack the metal.

These minute particles of flake graphite work into the cracks in the old scale and gradually penetrate between the scale and the metal. The scale may then be easily removed.

Origin of "Penny" as Applied to Nails

THE origin of the terms "six-penny," "ten-penny," etc., as applied to nails, though not commonly known, is involved in no mystery whatever.

Nails have been made a certain number of pounds to the thousand for many years and are still reckoned in that way in England, a ten-penny being a thousand nails to ten pounds; a six-penny one thousand nails to six pounds; a twenty-penny weighing twenty pounds to the thousand; and, in ordering, buyers call for the three-pound, six-pound, or ten-pound variety, etc., until by the Englishman's abbreviation of "pun" for "pound," the abbreviation has been made to stand for penny, instead of pound, as originally intended. — *Hardware World*.



Storage Tanks and Stack

Associated Oil Co., Fresno, Calif.

THE storage tanks and smoke-stack shown above are protected with Dixon's Silica-Graphite Paint.

Dixon's sticks, no matter what the conditions are. Once a Dixon user, always a Dixon patron and boomer.

Try Dixon's Silica-Graphite Paint once for service.

How Shellac is Made

SHELLAC is the product of a tiny insect which infests certain trees in the East Indies. The term lac is the same as the Hindu numeral lac—a hundred thousand—and indicates the countless myriads of insects which make their appearance each spring on the young, tender shoots of the infested trees. These feed upon the sap in the bark, and after passing it through their bodies exude it in the form of a crimson-colored resin, which in course of time

hardens into a tiny semi-transparent cocoon or shell.

It is these cocoons which, after being melted in boiling waters and poured out on a cold surface, constitute the shellac of commerce.

Shellac has many uses. Sealing wax is practically all shellac. It is the principal ingredient in most varnishes. Hat manufacturers cannot make hats without it, a shellac solution being essential for the stiffening process. Photographers find it absolutely necessary in their business, a similar solution entering into the composition of all films, while it is, of course, the main essential in all kinds of lacquer work. In fact, there is hardly any substance that is so generally used in so many widely different trades and manufactures.

Yet but for the fact of a tiny insect desiring to keep itself warm and comfortable the world would have none of it.—*Hardware World*.

DIXON'S Ticonderoga Flake Graphite will give you both cheaper and more dependable lubrication.

The improved operation of engines and compressors and the reduced oil costs will more than offset any expenditure necessary for special graphite lubricators.

Dixon's Flake is easy to use and its economies over other methods of lubrication are countless. It is sold everywhere in handy red tins or in bulk.

For coarse flakes ask for No. 1; for fine ask for No. 2. For further information on graphite lubrication write for Booklet No. 190-C.

JOSEPH DIXON CRUCIBLE CO.

JERSEY CITY, N. J.

Established 1827



For Cylinder Lubrication



TN
745
A2
C7

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Graphite

VOL. XXIII

MAY-JUNE, 1921

No. 5



JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



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Central and South America Cuba and Porto Rico

NATIONAL PAPER & TYPE Co.,
32 Burling Slip, New York, N. Y.
Offices in Principal Cities

Europe, Africa and India

L. G. SLOAN, LTD.,
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Representatives in Principal Cities

Australia and New Zealand

WILLIAM LEWIS,
Stafford House, Sydney, Australia

Philippine Islands

PHILIPPINE EDUCATION Co.,
Escolta 34, Manila, P. I.

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AMERICAN TRADING Co.,
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and Japan

Graphite Products

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44 Whitehall St., New York, N. Y.

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Sydney

Asia

Calcutta
Shanghai
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Latin-America

Havana, Cuba
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Canadian Agents

CANADIAN ASBESTOS Co.,
Montreal, Quebec

Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.
U. S. A.

Volume XXIII

MAY-JUNE, 1921

Number 5

Graphite Lubricants

IT is obvious that to try to use graphite as a lubricant instead of oil would be useless, as solid friction is always greater than liquid friction. The oil used must be able to keep the metallic surfaces apart, either by its oiliness, its power of creeping with an unbroken film over the metal, which necessitates a low surface tension, or by its viscosity, whereby it is carried along by the rotating portions, and wedged in between them and the fixed portions. To use an oil of a viscosity more than sufficient to do this is wasteful, as energy is lost in shearing oil. Liquid lubricants, however, are greatly influenced by a rise of temperature, and a decrease in the viscosity of about 3 per cent. per degree centigrade is quite a usual value for thick oils between 60 and 90 deg. cent. At cylinder temperatures all oils have very much the same viscosity. Under such severe conditions liquid oil films are apt to break, so the presence of a solid lubricant like graphite, which is almost entirely unaffected by such temperatures, is highly desirable. Graphite, then, may

be considered as a lubricant of special value for cylinders and valves of internal-combustion engines. It is also of value for use on bearings, especially when subjected to heavy pressure, in which case the oil film may fail. A graphite film in a bearing, besides reducing the solid friction of metal to metal, provides a skin which is renewed from the oil, this skin being worn away instead of the metal. After graphite has been in use in an engine for some time, the amount in the oil, always a very small quantity, can be further reduced, for once the graphite surface is formed a very small quantity suffices to maintain it. *It is difficult to explain why the use of graphite reduces the consumption of lubricating oil, but it undoubtedly does so.* The film deposited is too thin sensibly to alter the clearances. The explanation which appears the most probable is that by reducing the friction and the eddy currents in the oil due to surface irregularities, the temperature of the oil film is, on an average, reduced, and its viscosity being on that account greater, its rate

of flow is diminished. It is also possible that, on the cylinder walls, where oil probably vaporizes with the fuel, a certain residue of graphite remains, and in this case the clearances between piston rings and cylinder walls may be slightly reduced. Apart, however, from any explanation of its action, the saving is an established fact, and in certain cases it appears that power also is saved.—*S. A. E. Bulletin.*

"A Water Scene in Holland"

"Eldorado" drawing by Earl Horter
—reproduction on front cover

TALL, narrow, ancient dwellings along the edge of the canal, the slender masts of fishing smacks, and over all a brooding stillness: a picture of the quiet, industrious land and people, with deft touch of dainty quaintness, making you think of landscapes with blue windmills on cups and chocolate pots, and men with queer wooden shoes and voluminous breeches. Yes, this is "a bit of Holland," as we have seen it in picture and story.



AN architect is known not only by the beautiful or commodious shape of the building he designs, but also by the *material* he specifies.

For service, highest quality, longest standard record, protective and ornamental purposes (in dark colors), Dixon's Silica-Graphite Paint leads the world—an American product with an American conscience, for the American architect and owner of buildings, used both for construction and maintenance purposes.

Graphite for Shotguns

EVERY once in a while one of our customers writes and tells us that they have found a new use for graphite. The latest use is for automatic shotguns, and the following letter explains just how.

"We have been dealing and jobbing in your line of Graphite Greases for over four years, and it seems that every day brings new experiences and uses for *good* graphite. The latest experience we had is so good that we thought that we had better pass it on as it might help you and be to our mutual benefit. Last fall when we were unpacking our shotguns for demonstrations in our store, we cleaned the guns up and removed all grease and oil, making every part absolutely dry. We then shook in a good supply of Dixon's Motor Graphite, and you could work the slide actions very easily with two fingers.

"When one of the gun salesmen came through he picked up a Remington repeating shotgun and said, 'Where did you get this gun? It is the best working gun that I have ever seen. I want to buy this gun for myself.' So we sold the Remington gun to the Remington salesman. This is only one of many cases that we can trace directly to the use of Dixon's Graphite in our guns.

"BOND & HAWKINS,
"Muskatine, Iowa."

An Exception

FLATBUSH: "Do you think a man profits by his mistakes?"

BENSONHURST: "Not if he marries the wrong woman he doesn't."—*Yonkers Statesman.*



Bridge, Wilkes-Barre & Hazleton Railway

Hazleton, Pa.

12 Years' Paint Service

THE bridge illustrated above is owned by the Wilkes-Barre & Hazleton Railway, of which Mr. C. B. Houck is Vice-President.

The bridge was painted 12 years ago with Dixon's Paint, and has recently been repainted with Dixon's.

"Efficiency" officials like Mr. Houck require real economy and service. Dixon meets the test wonderfully, for in the case of this bridge, not only usual weather conditions are met, but unusual attack from cinders, gases, smoke, and other deteriorating agents.

Experience

AGE alone does not give Experience. A soldier may live a lifetime in the space of a year. But age, which is crowded with events, which has had to make infinite adaptations, and which has tested countless theories in the crucible of practice, gives the sort of Experience that stands by us when the abstract doctrines of books give very little help.

Yet the richest Experience can be as sterile as an unwatered plant: it will blossom into service only when it is put into use.

Not what a man's experiences are, but what he does with them, is the thing that counts.—THE DE VINNE PRESS.



Shingle Roof, Vendome Hotel

San José, Cal.

KIPLING and Omar the Persian sang of "lands of palm, orange, rose, and cedar." California is such a land.

The illustration shows the Vendome Hotel, the shingle roof of which is painted with Dixon's Silica-Graphite Paint. G. E. Lenzen Co., Inc., of San José, were the contracting painters, and the Dixon San Francisco representative, Mr. W. Shulman, took this clear photograph.

If you cannot go to California, you can at least use Dixon's Silica-Graphite Paint and feel as well protected from rain as are the satisfied guests in the palm-bowered Vendome!



A Solid Fact

"WHAT is the hardest thing about skating when you're learning?"

"The ice."—*Boston Transcript*.



Your car is given a new lease on life when Dixon's takes hold of transmission and differential gears.

The lasting film of lubricant which it spreads around and between the teeth, cuts down noise, increases power, saves fuel and tones things up generally.

Most dealers can supply you.

DIXON'S Gear LUBRICANT

JOSEPH DIXON CRUCIBLE CO.
Jersey City N. J.  Established 1827



Window Display, Fox Brothers Hardware Co.

Pine Bluff, Ark.

THE above illustration shows how the Fox Brothers Hardware Co., Pine Bluff, Ark., make use of the Dixon Automobile Transmission and the red cans of No. 677 and other Dixon lubricants to make an attractive window display. In the foreground are shown photos of some of the many racing drivers who use Dixon's Automobile Lubricants, while in the background are several of the Dixon Racing Posters.

The color of the Dixon cans, red, is one which will always attract attention in a dealer's window. The moving transmission is always an attraction and will catch the eye of passers-by when other means fail. These transmissions show how Dixon's No. 677 keeps the gears covered at all times, even when the gears

are not in motion. This is important, as many lubricants will cover the gears when in motion but not when stopped.

The Fox Brothers Hardware Co. are to be congratulated upon this excellent window, and we have no doubt that it was the means of bringing many customers into their store.

Successful

"WERE you trying to catch that train, sir?" he asked pompously.

The panting would-be passenger eyed him balefully for a second before he hissed in reply: "Oh, no, I merely wanted to chase it out the station."—*The Arklight*.

CONCENTRATION is the secret of strength.—*Emerson*

New Dixon Pencils and Re-instatements

New Goods

May we introduce "Embassy," No. 1016?—a round, tapering pencil, with a rubber end, finished in blue; packed one dozen in a box, six dozen in a carton.

You have a distinct impression when you look at this new style,—one word rushes to your tongue's end,—*class*. And when you write with its responsive lead, the impression is deepened and fixed.

Be not the last by whom the new is tried.

This pencil will retail at 10 cents each, \$1.00 per dozen.

"Rambler," No. 700, is a newcomer. Round, maroon, nickel tip with rubber, No. 2 lead. Packed in dozens, half gross in a box.

"Wonder," No. 275, is a new round pencil, with nickel tip and rubber, finished in red, and packed in dozens, half gross in a box.

"Wonder," No. 276, is the hexagon,—in every other respect the same as No. 275.

"Tip-Top," No. 315-Y, round, and

"Tip-Top," No. 319-Y, hexagon, nickel tips and rubbers; dozen bundles, half gross in a box.

Re-instatements

No. 431, flat assortment box, containing $\frac{1}{2}$ gross round and hexagon rubber-tipped pencils.

"Artisan," No. 269, red finish.

"Artisan," No. 271, black finish.

"Giant," No. 2005-C, $\frac{7}{16}$ " diameter, gilt tip, red rubber, 1 dozen on card. Yellow, light green, and light blue finishes, assorted.

Dixon's Phosphorizers

A PHOSPHOROUS charger, or phosphorizer, is a device made of plumbago crucible material, which is used for the introduction of phosphorus into the molten metal in the manufacture of phosphor-bronze. An iron holding rod is securely fastened through the hole running to the top. The phosphorus, securely wrapped to prevent spontaneous ignition, is placed in the lower chamber, and the phosphorizer is then plunged into the molten metal. The charging of the phosphorizer with the phosphorus is an operation which requires some degree of care and skill.

The sudden change of temperature which the phosphorizer undergoes in being plunged into the molten bronze can be withstood only by plumbago crucible material, and the phosphorizer must be warmed and treated the same as a crucible is the first time it is used, that is, warmed up and all moisture driven out.

The demand for phosphor-bronze in the manufacture of piston rings, valve covers, machine castings, pinions, cog-wheels, propeller screws, hydraulic press and pump barrels, piston rods, screw bolts for steam cylinders, hardware, etc., has greatly increased, and the Dixon Phosphorizer will be found indispensable by casters for the introduction of the proper amount of phosphorus and the attaining of the best results.

Booklet No. 190-A, giving sizes of phosphorizers as well as other refractory materials, will be sent free to those requesting.



Water Tank, Water Works Department

Village of Briarcliff Manor, N. Y.

THIS water tank is the property of the Water Works Department of the village of Briarcliff Manor, New York, Mr. Patrick Manahan, Superintendent.

The tank has a holding capacity of 100,000 gallons. It is 140 feet high, and was built by the Chicago Bridge & Iron Works of Chicago, and protected with Dixon's Silica-Graphite Paint.

Dixon's Paint is recommended and used by water works departments, municipalities, and others because of its long service records. When used on the interior of water tanks, it does not injure or affect the water.

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII MAY-JUNE, 1921 No. 5

Service is the Word

EVERY business man is interested in the manner in which every other business man conducts his business.

This interest is not only moral—it is financial as well. The methods employed by any business man in America in marketing his products reflect themselves to a degree in the cash drawer of every other business house in the country.

Present-day conditions have driven home effectively the fact that the success of business depends upon the confidence displayed in business by the buying public.

Confidence, or the lack of confidence, in a buying sense is not an intangible, vague, uncontrollable thing, born of resentment, as many seem to believe. It is, on the contrary, real. It can be located—controlled.

Confidence is the result of an opinion formed in the public mind from the public's contact, either with an individual or an institution.

The broadest contact which the public has to-day with American business is through advertising. For that reason, advertising is the greatest

source of creating public opinion one way or the other toward business.

Service is the word that means everything to the future of American business, whether it applies to the word truthfully spoken and sedulously kept, or the little courtesies that cost nothing but mean so much.

If America would hold its place with its own people and stand out before the world as a nation with which it is safe to trade, service must be made the watchword. It is the most economical type of advertising ever evolved.

Let us keep in mind that what we say and what we do to-day reflects primarily on us, but has its effect, nevertheless, on the whole of industry.

After all, industrial America is a single unit in which no individual can attain his maximum until every other individual assumes his share of the burden of selling the public to the good intentions of all business.—*Associated Advertising.*

THE fellow who waits till to-morrow—waits—and waits. And the years glide by—to find him still waiting.—*Disston Crucible.*

WHEN Service and Quality keep house together, Satisfaction hangs up its hat for a long stay.—*Paragraphs.*

THE basis of business is confidence and the basis of confidence is understanding.—*Mason's Monthly.*

No man can be truly educated or successful in life unless he is a reader of books.—*Benjamin Franklin.*

Dixon Automobile Lubricant Painted Bulletin Boards

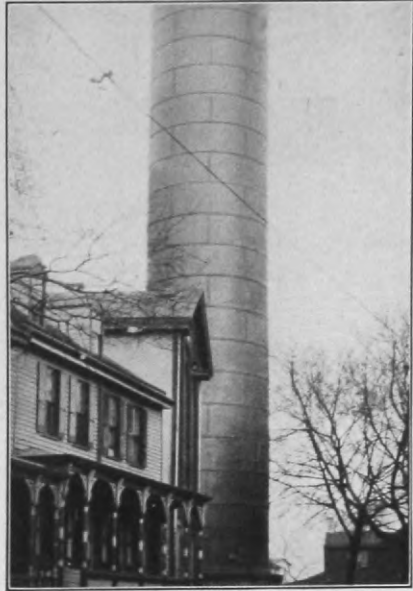
THE illustrations on the center spread of this issue of GRAPHITE show the new painted bulletin boards erected on four of the main boulevards in Los Angeles, California.

These boulevards are as follows: Wilshire Boulevard, covering the main traffic to all of the beach towns, country clubs, and aviation fields, is considered the aristocratic drive of Los Angeles; Whittier Boulevard, the main thoroughfare to Santa Ana and also San Diego, is one of the heaviest traveled boulevards entering Los Angeles; Washington Boulevard covers traffic to beaches as well as to Culver City, where many of the motion picture studios are located; Huntington Drive covers traffic to Pasadena, Monrovia, Sierra Madre, and Foothill towns.

With the exception of the sign on Huntington Drive, which is illuminated, the signs show the red Dixon can tipped and elevated above the rest of the sign. This gives an unusual effect and an exceptional display of the can.

These signs have a yellow background, black lettering, and the 677 can in red. This makes a display of striking colors and one which can be seen and easily read from a distance.

The value of painted signboards as an advertising medium is well known and generally accepted. For such products as Dixon's Automobile Lubricants, this type of advertising is one of the best.



Standpipe, Burlington Water Company

Burlington, N. J.

THIS standpipe of the Burlington Water Company is protected on the interior and exterior with Dixon's Silica-Graphite Paint.

If any of our readers of GRAPHITE are interested in a paint for standpipes, tanks, or other structures in need of a protective coating, and they will write us, we shall be glad to furnish them with full particulars in regard to Dixon's Silica-Graphite Paint.



Mechanical Research

"WHERE is the universal joint?" asked Henrietta.

"In the bootleg," replied Henry, stepping on the accelerator.—*The American Legion Weekly*.

WILSHIRE
BOULEVARD



DIX
Lubr
Signb
in Los An



WASHINGTON
BOULEVARD

WHITTIER
BOULEVARD



KON
icant
boards
geles, Calif.



HUNTINGTON
DRIVE



California Packing Corporation

Water Tank, Plant No. 3, San José, Cal.

Smokestacks, Milpitas, Cal.

THE above structures, owned by the California Packing Corporation, packers of the famous "Del Monte" fruits and vegetables, are painted with Dixon's Silica-Graphite Paint, the truest, surest, and most popular of service paints.

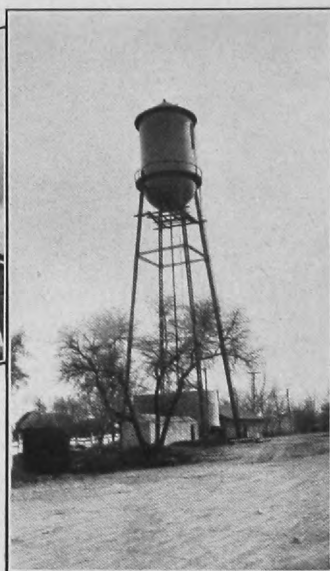
When you find a *real* paint, stick to it, like you do to your minister, doctor, friend, or any one else who serves you and protects you from your natural faults and dangers, wear and worry.



Sure Sign

SHE (tenderly): "When did you first know you loved me?"

HE: "When I began to get mad when people said you were brainless and unattractive."—*Brown Bull.*



Dixon's Graphite Stoppers

A STOPPER is a small tool, but it carries a great responsibility. On its integrity depends the safe flow of usually from 15 to 60 tons of molten metal.

The Dixon Stopper as made to-day is a vast improvement over anything heretofore made. We have given the matter intelligent study, have made many experiments, and furnish a stopper which for quality has no rival.

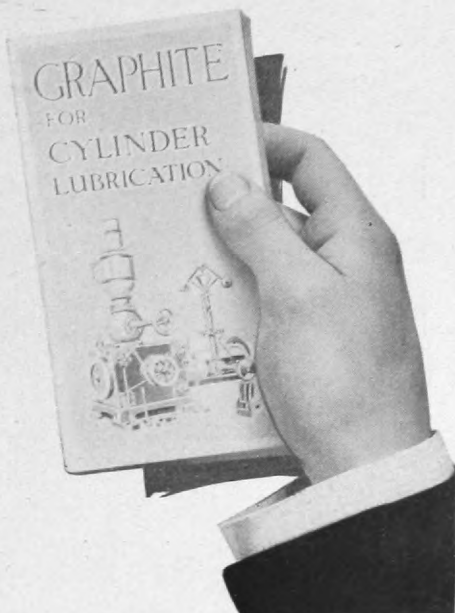
At the present time we have some hundred different patterns, and from among them it is not difficult to find one suitable for almost any condition. In addition to stoppers and nozzles, we also make sleeves.

Dixon's Moist Stopper Mixture is made of the same materials as are the stopper heads and sleeves. It is packed in kegs and barrels.

Send for this Booklet

IT will show you how to cut the cost of cylinder lubrication in half.

It tells what causes friction and explains how graphite lubrication is the best method to combat friction.



DIXON'S FLAKE GRAPHITE

causes smooth, easy valve action, lessens strains upon valve gear, and assures even steam distribution. It will lengthen the life of packing rings, prevent scoring, reduce blowing, and eliminate oil from the exhaust.

Dixon's Flake Graphite is easy to use and its economies are countless. For coarse flakes, ask for No. 1; for fine flakes, ask for No. 2.

Write to-day for this free booklet No. 190-C.

JOSEPH DIXON CRUCIBLE COMPANY

JERSEY CITY



ESTABLISHED 1827

NEW JERSEY



A Series of Pencil Portraits
 NO. 1—THE BUSINESS MAN



"I USED to think that Dixon's Eldorado pencils were only for artists. Then, one day, the awakening!

"Some one left one of these pencils on my desk. I tried it—liked it—treasured it more than any other pencil I have ever used.

"Let no one forget that a good pencil has just as much influence on the work of a business man as on the work of an artist, architect, or engineer. It is one of those seeming trifles that make perfection."

**DIXON'S
 ELDORADO**
"the master drawing pencil"

JOSEPH DIXON CRUCIBLE COMPANY
 PENCIL DEPT. 190-J JERSEY CITY, N. J.

Canadian Distributors:

A. R. MacDougall & Co., Ltd., Toronto

Dixon's Eldorado is made in 17 leads—one for every need or preference.

DIXON'S "ELDORADO" the master drawing pencil—H.B.

**Write for
 These Good
 Booklets**

One is called "FINDING YOUR PENCIL"—a pencil service booklet for every one who uses a pencil. Write for it. It will help you choose exactly the right pencil for your particular work. Also write for our booklet—"A Study in Sepia." It shows the character of work that can be done with DIXON'S "BEST" Colored Pencils.

Guide Post



THERE is a quiet little gentleman in the Dixon outfit, and we are now going to bring him forward into the limelight.

He has been with us for a good many years.

All of this time his friends have been growing in numbers, until now they, that is,—but who can really count them?

His friends are those people who put wooden tags on little trees and plants. You see these tags on all sides, at Xmas and at Easter-time, in the shops of florists.

If you are a nurseryman or a florist, if you ever mark these little stakes or tags to show what you've planted, and when, it is a sure fire thing that you know (you certainly should know) Dixon's 804 pencil.

Its lead makes a jet black mark.

Let the rain rain and the sun shine; let the winds blow the soil up around these marks; come frost, come snow, when it is time to refer to the marks made on the little tag by the 804, these marks *will stare you in the face*.

We call this "Marking for Keeps."

What do you say?

Say 804 to your stationer, if you need a pencil for the kind of marking we describe.

Annual Meeting, 1921

THE stockholders of the Joseph Dixon Crucible Company held their annual and regular meetings on Monday, April 18, 1921. The following directors and officers were elected:

DIRECTORS

GEORGE T. SMITH GEORGE E. LONG
WILLIAM G. BUMSTED EDWARD L. YOUNG
J. H. SCHERMERHORN HARRY DAILEY
ROBERT E. JENNINGS

OFFICERS

GEORGE T. SMITH, *President*
J. H. SCHERMERHORN, *Vice-President*
HARRY DAILEY, *Secretary*
WILLIAM KOESTER, *Treasurer*
JOHN I. MCCOMB, *Asst. Secretary*
J. W. ROBOTOM, *Asst. Treasurer*
JOHANNA MAERTENS, *2d Asst. Secretary*
JOHN J. NEVIN, *Comptroller*

Of the 50,000 shares of stock, 42,977 were voted. Undoubtedly a greater number would have been voted had it not been that a number of shares are held by estates, the executors of which do not feel at liberty to vote in an election.

The report made by President Smith and the remarks made by him on the business of the Company were received by the large number of stockholders present as most satisfactory and pleasing.

The American Graphite Company, incorporated under the laws of the State of New York, is owned and operated by the Joseph Dixon Crucible Company, and its annual election was held on the same day as that of the Joseph Dixon Crucible Company. The following officers were elected:

GEORGE T. SMITH, *President*
J. H. SCHERMERHORN, *Vice-President*
HARRY DAILEY, *Secretary*
WILLIAM KOESTER, *Treasurer*
JOHN I. MCCOMB, *Asst. Secretary*
J. W. ROBOTOM, *Asst. Treasurer*
JOHN J. NEVIN, *Comptroller*

The directorate is the same as that of the Joseph Dixon Crucible Company.



"Outside" of Princeton University

Princeton, N. J.

MOST of us are on the "outside" unfortunately! Those who get inside and through Princeton are lucky boys, started well in life with thorough training in a great university.

The fence illustrated above is painted with Dixon's Silica-Graphite Paint, also a famous Jersey product which "delivers" full and dependable service.



Temperamental Travel

"CONDUCTOR!" shouted a passenger on the back-country train. "That was my station, sir! Why didn't you stop?"

"We don't stop there any longer," said the conductor. "You see, the engineer is mad with the station agent!"
—*Youth's Companion*.

Putting It Across

NOTHING can be put across in this world without enthusiasm. No fame—no name—has ever been gained except through belief, backed by that whole-hearted, earnest effort which makes long hours pass quickly and hard work a pleasure.

Unless you have, first and last, an abiding faith in your project and in your ability, you cannot successfully carry it out.

Enthusiasm is the connecting link between you and the world.

It carries you forward with a rush, overcomes obstacles, surmounts difficulties, and gains your goal.

Enthusiasm is the key which opens the hearts of the world's people.

On the base-ball field, the battle-front, or in the busy ways of trade and industry—it's all the same. People like pep, and their plaudits and rewards are for the fellow who goes at it heart and soul.—*The Finder*.

Bearing Metals

EXPERIMENTAL work on determining the compression and hardness values of white metal bearing alloys at temperatures up to 100° C. has been completed. A paper has been prepared entitled "Some Properties of White Metal Bearing Alloys at Elevated Temperatures," a summary of which is as follows: An apparatus is described for determining the yield point and ultimate strength of white metal bearing alloys at temperatures up to 100° C. A new design of heating apparatus is described for determining the Brinell hardness of such metals in the range of temperatures indicated above. The results of compression tests and Brinell hardness tests at temperatures up to 100° C. are given for five typical white metal bearing alloys, including three tin base alloys, one lead base alloy, and one intermediate alloy. These tests showed that the tin base alloys maintain their properties better at elevated temperatures than those containing lead. Results of tests are given which indicate that up to 3 per cent. the lead in a high grade babbitt does not affect the yield point or ultimate strength at 25° C. or 75° C. Tests are described which show that the yield point of tin base alloy is not affected by heating for six weeks at about 100° C., but that the yield point is lowered in the lead base alloy by heating for only two weeks at this temperature.—*Scientific American*.

◆

WE are most admired when most sincere.



Trolley Poles, San Francisco-Oakland Terminal Railways

OUT on the Pacific Coast they paint almost everything with Dixon's Silica-Graphite Paint, except the ocean and the oranges.

California State is beautiful and wealthy and wants good service. It is a nation in itself, as large as our original "13 States."

Dixon's Silica-Graphite Paint is as wide as the globe; that is it is used everywhere for every kind of protection. It is not "globular," however, in one respect, because the natural silica-graphite is flaked like an overlapping, elastic fish, or armor-scale. Thus it is tight enough to exclude moisture, and it is elastic enough to expand and contract.

DIXON CRUCIBLES

For Every Metallurgical Requirement

SATISFACTORY crucible service for every metallurgical requirement is assured when DIXON'S are used.

Large or small, DIXON CRUCIBLES are uniform in composition, construction, and performances. You can rely on them because the experience gained through ninety-two years of crucible-making stands back of every one.

There need be no worry about crucible trouble in the middle of a melting operation if the crucible you use bears the name DIXON.

Write for new catalogue No. 190 A.

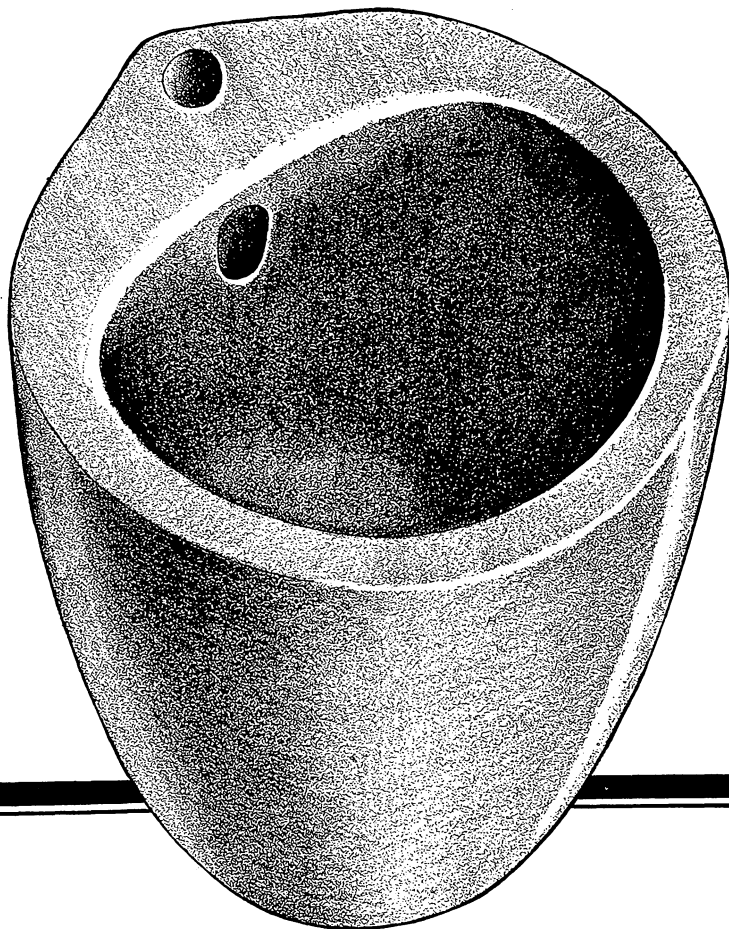
JOSEPH DIXON CRUCIBLE COMPANY

JERSEY CITY

NEW JERSEY



Established 1827



Cost of Melting Non-Ferrous Metals

To the Editor of THE METAL INDUSTRY:

The factors entering into the cost per pound of melting and casting non-ferrous metals of a given quality are, in order of their relative importance, as follows:

1. Labor Cost.
2. Overhead.
3. Fuel Cost.
4. Interest and Depreciation.
5. Maintenance and Repairs.
6. Supplies.
7. Metal Losses.

There are other factors to which no definite value in dollars can be assigned, but which are, nevertheless, of vital importance; for instance, versatility of the plant, by which is meant the ability of the plant to give satisfactory service both in cost and quality in the face of the constantly changing requirements of the business. A plant producing a certain line of product to-day may install equipment which will give very satisfactory results; at some later period the demand for this particular product may diminish and the plant is called upon to produce an altogether different line; it is then discovered that the equipment which was suitable for the original production becomes a handicap.

Another consideration of equal importance is what might be termed the "power factor" of the installation as a whole. Power factor is of importance in electrical engineering and indicates the extent to which a dynamo or motor is operating to its capacity; for example, a 500 H.P. motor driving a machine which requires only 200 H.P. is operating at a very low power factor, and the cost of running the machine is therefore tremendously increased. A 2000 lb. furnace being used for melting a 200 lb. charge is operating with an extremely low "power factor," and the cost of melting the 200 lbs. is very high. A plant might have on its books business enough to warrant the installation of say one 2000 lb. furnace, but with the always to be expected period of business depression, it is likely to be necessary to reduce the pro-

duction by 50% or more, with the result that the furnace will be operated at a very low power factor, and the cost of melting increased out of reason.

In general, the larger the unit or charge to be melted the lower the cost. The larger the unit or charge employed the lower the degree of versatility and the more important the operating power factor becomes. A balance must therefore be struck between the cost of melting, the degree of versatility necessary as governed by the nature of the business, and the importance of the power factor which is to some extent governed by the cost of the installation.

The electric melting furnace is by far the most expensive installation, averaging about five times the cost of a coal, gas or oil installation of the same capacity, and they cannot be made to operate economically with small charges. For this reason the considerations outlined above regarding degree of versatility and power factor, are of much greater importance with the electric furnace than they would be with a fuel fired installation, on account of the greater amount of money involved.

Of the different designs of electric furnaces now available there is practically no one furnace suitable for all commercial non-ferrous alloys and casting conditions; for example, the vertical ring induction furnace is satisfactory for continuous quantity production of a standard alloy, provided that the alloy has a fairly high electrical resistance and contains but a small percentage of lead. Alloys rich in copper and containing more than about three per cent. lead cannot be handled. There is a resistance furnace which can be used for practically any alloy where stirring is not required and where pouring into a ladle and thence into molds is permissible, but the design of this furnace from the heat-application standpoint is very poor, and excessive slagging of the lining is a constant source of inconvenience. There are still other types of rotating arc furnaces which can

be used for practically all alloys, but slagging and breakage of electrodes, etc., are a constant accompaniment of the commercial operation of this type of furnace.

I find, therefore, that in the plant producing a variety of alloys and where pouring is done into iron molds, the electrical installation has the following disadvantages:

1. There is no one type of electric furnace adaptable to all requirements.

2. The high cost of electric furnaces reduces the feasibility of having a unit of each type of electric furnace to suit the varied requirements.

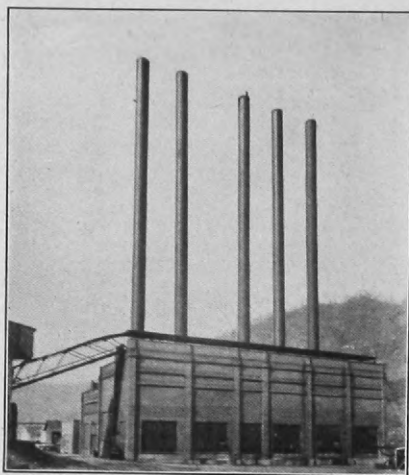
3. The degree of versatility of the electric furnace is very low in comparison with the crucible furnace.

4. Operating power factor is likely to be very low in dull periods with a resulting increased overhead and amortization charges, etc. This may also be aggravated to some extent by the fact that, as a rule, in order to obtain a low rate from the power company, it is necessary to contract for a certain amount of power in a given period which must be paid for whether the power is used or not.

5. High cost of auxiliary casting shop equipment. It is necessary not only to buy an electric furnace, but also to install expensive equipment either to move the furnace to the molds or the molds to the furnace by means of trolleys, turntables or cranes, etc.

I do not wish to imply that there are no conditions under which the electric furnace in one of its numerous types would be satisfactory; however, it very frequently happens that electric furnaces are installed for some one particular reason without sufficient attention being given to the many other considerations entering into the problem. The purpose of this letter has been to point out some of the factors which are likely to be ignored or glossed over. The furnace engineer rather than the furnace maker should be consulted and the whole problem given much more study than is usually the case. The use of gas and oil for brass melting offers greater possibilities than elec-

(Continued on page 4927)



Power Plant, Kentucky & West Virginia Power Co., Inc.

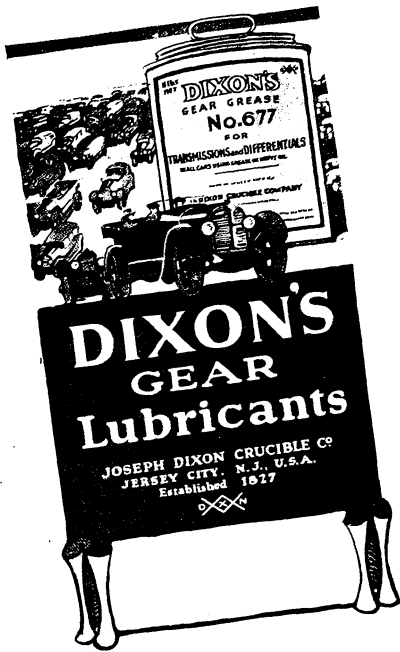
Sprigg, W. Va.

THE smokestacks shown are 165 feet high and six feet in diameter. They are painted on the interior and exterior with Dixon's Silica-Graphite Paint, Mr. R. E. Bridgers, of Sprigg, W. Va., being the contracting painter.

"Best managed" companies and the "best" steeplejacks use the "best" protective paint. No use of wasting and endangering labor by using cheap paint on unusual, hard structures, like smokestacks and steeple-painting.

If you live near Mr. Bridgers of Sprigg, send for him, and take his advice on a real paint that soars to *high altitudes* of service, but is not *high in price*, considering the long protection given.

SOME men have followed the wrong way so long that it seems right to them.—*The Bagpipe.*



Proper Gear Lubrication

THE proper lubrication of transmission and differential gears is of vital importance, more so than the ordinary motorist realizes. Because these parts are unseen and usually more or less difficult to get at, they are too often neglected. All the power generated by the engine is transmitted through these gears to the rear wheels, and unless one likes to buy gasoline, it is essential that the bearings and gears be well lubricated all the time. Otherwise there will be excess friction for the engine to overcome.

We have just published a new and extremely interesting booklet on the subject of proper gear lubrication. This little booklet tells clearly and

concisely just what a good gear lubricant should consist of, and calls attention to the necessity of providing a proper lubricant for these important gears.

Our various lubricants, such as No. 677, No. 675, and Cup Grease, are described and recommendations are made for the different parts of a car. This is illustrated by a chart showing a chassis with numerals referring to paragraphs telling just what Dixon Lubricant should be used in that particular place.

A copy of this booklet will be sent free to all requesting it. Simply drop a postal to the Joseph Dixon Crucible Co., Jersey City, N. J., and ask for Booklet No. 190-G, and it will be sent at once.

Cost of Melting Non-Ferrous Metals

(Continued from page 4926)

tricity, but unfortunately electrical equipment has been very widely advertised and the statements contained in the sales matter are not altogether free from exaggeration and misapprehension. For example, the many tabulations of melting costs which have been published from time to time contain much that is misleading. As one eminent authority known to the writer has said: "Figures don't lie, but liars can figure."

Gas and oil equipment and processes have received but little of this advertising and the advantages and economies arising from their use are but little realized.—EQUIPMENT ENGINEER. *From Metal Industry.*



In Tents

"Pop, what is a tentative performance?"

"It's one of them open-air shows, sonny."—*Baltimore American.*

A New Dixon Lubricant

Grease No. 672

THIS is a spongy grease of medium density, prepared primarily for the lubrication of universal joints.

It was developed in the Dixon laboratories with painstaking care and has been placed on the market only after thorough tests have proven its exceptional lubricating qualities.

A wide range of temperature and climatic changes do not affect its normal plastic condition.

A sample of No. 672 will be sent on request.

JOSEPH DIXON CRUCIBLE COMPANY

Jersey City, N. J., U. S. A.



*For Spur and Bevel Gears
Use Dixon's No. 677
Gear Lubricant.*

*For Worm Drives Use
Dixon's No. 675
Gear Oil.*

TN

845

A2

G7

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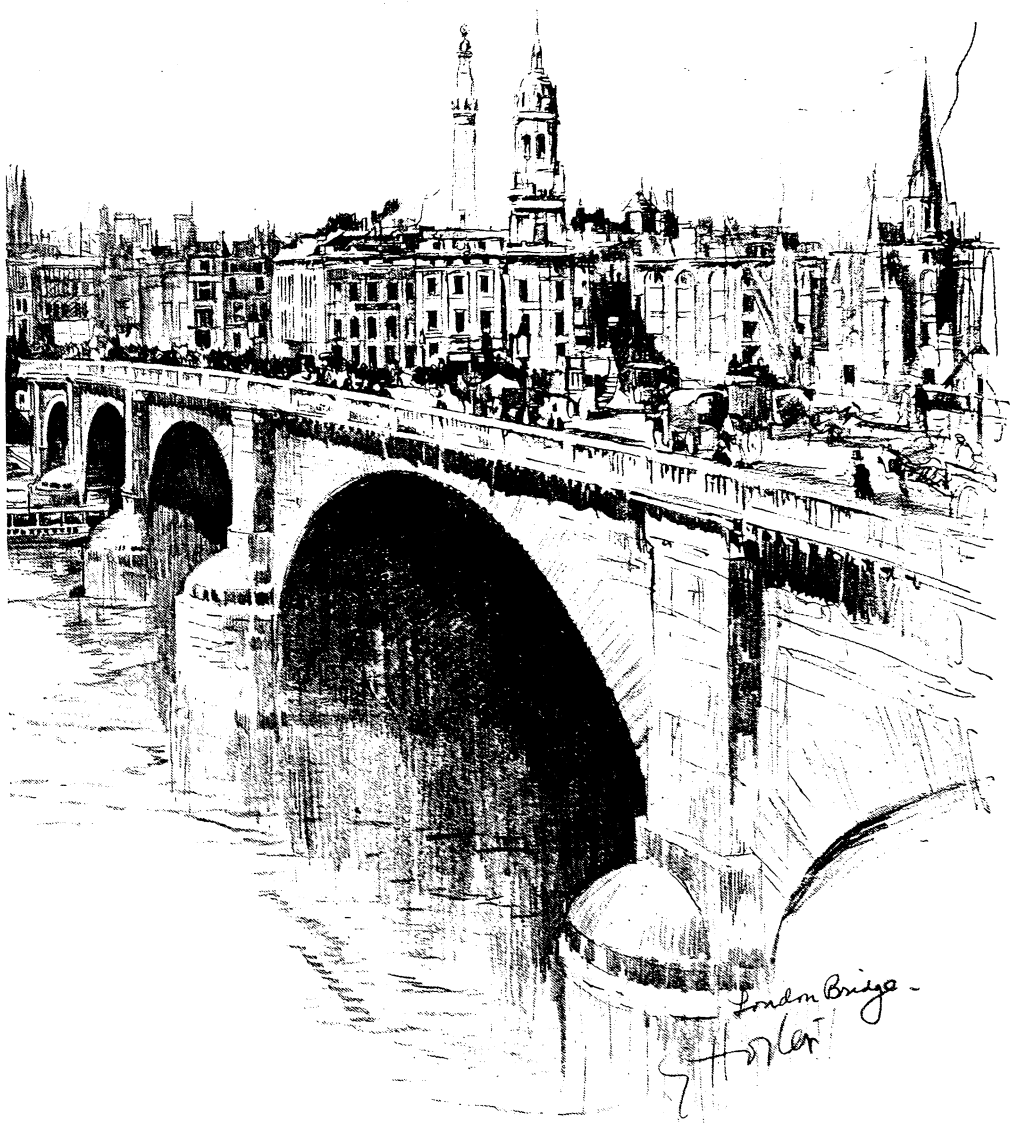
VOL. XXIII

AUG 19 1921

Graphite

JULY-AUGUST, 1921

No. 6



JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



*Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead*



OFFICERS

GEORGE T. SMITH, *President*
HARRY DAILEY, *Secretary*

J. H. SCHERMERHORN, *Vice-President*
WILLIAM KOESTER, *Treasurer*

JOHN I. McCOMB, *Assistant Secretary*
J. W. ROBOTOM, *Assistant Treasurer*

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ROBERT E. JENNINGS

GEORGE E. LONG
EDWARD L. YOUNG
HARRY DAILEY

Comptroller
JOHN J. NEVIN

Purchasing Agent
JOHN I. McCOMB

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Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

JULY-AUGUST, 1921

Number 6

London Bridge

"Eldorado" drawing made by Earl Horter
(See front cover)

"THE charm of a pencil drawing is its soft simplicity . . . its gradations of light and shadow. A fine pencil is an inspiration to fine drawing . . . its long, rich strokes make one think one is painting."

Thus the artist, Earl Horter.

Readers of GRAPHITE who have seen for months back the work of Mr. Horter reproduced on the front covers will vouch that here is a man who knows whereof he speaks.

It is no exaggeration to say that in our own little world the Horter "Eldorado" drawings have "created a sensation."

"I concluded a long while ago," said Mr. Horter, "that I would devote myself to the task of showing people what are the possibilities of lead pencil drawing."

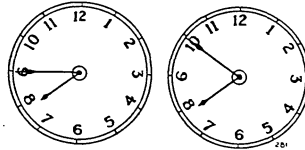
When you have devotion and enthusiasm and ability, why, gentlefolk, you have genius. Nothing short of it.

Genius! That's the word that describes Earl Horter.

A Square Deal Pays

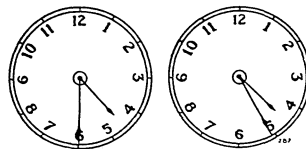
THE clocks of the plant are at all times correct to the dot. This is something worth noting. But how are you keeping time? If you are due to start work at 7:45 in the morning, does the clock look

Like this or Like this?



And then, when you quit in the afternoon, does the clock look on you

Like this or Like this?



If every man in the employ of this Company would stop and think what the loss of time means, there are few who would lose time. We too often think in the terms of an individual. A loss of ten minutes a day seems small to the man losing it, but multiply that

by 19,000 men, and we arrive at some staggering figures. Think this over. If you are due to start work at a given time, don't be five or ten minutes late. The man who is successful in life starts on time, and does not lose any during his working hours, and he does not stop before his quitting time.

If each of us were to lose ten minutes a day among 19,000 men, it would amount to 190,000 minutes, or 3166 hours, or 395 working days. This would mean a loss of services equal to 395 men, costing the Company \$1900 a day, or \$570,000 a year, over half a million dollars. This is no trifle.

If we discover our pay envelop is short, how peeved we become. We are not satisfied until the loss is recovered.

When we lose time it is the Company who is short. Ought we not to be as careful of the Company's time as we are of what we receive in our pay envelop? A square deal always pays; think it over.—From *Yorkship News*, House Organ of the N. Y. Shipbuilding Co., Camden, N. J.

Crucible Service

WHEN our Mr. Edmond St. John called on the — Foudry Co., —, Mo., the other day, this customer did not have to be shown, but told St. John that Dixon's No. 50 and No. 60 size crucibles were the best ever sent out. Of late they have been getting 35 to 38 heats from them on red and yellow metal, and after this service they were still able to get 35 heats more on aluminum, making a total of 70 heats on brass and aluminum.



"After an exhaustive test of lubricants, I find Dixon's Automobile Lubricants to be far superior to all others. I will use them in all of my future races."

—ROSCOE SARLES.

Roscoe Sarles Wins at Uniontown

IN a Duesenberg car, Roscoe Sarles won the 225-mile Universal Trophy race at the Uniontown Speedway, on June 18. In doing this he beat the track record by over two minutes.

Once more Dixon's Lubricants have demonstrated their ability to withstand the severe strain imposed by fast long-distance races.

At the Indianapolis Speedway, Sarles won second place in the annual Memorial Day race.



“Eldorado”—Keuffel & Esser Window

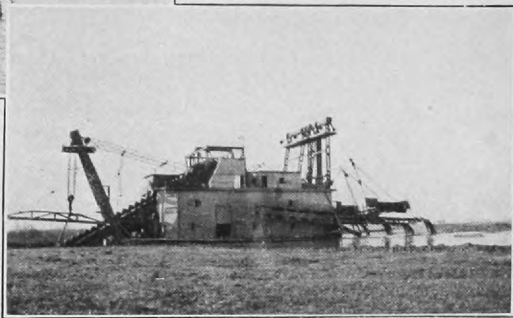
OUR Mr. Wm. Bowen, Jr., writes us from Dallas that the Eldorado—Keuffel & Esser window arranged by one of his customers, Messrs. Huey & Philp, of that city, was a very decided success in every way. Mr. Bowen assures us that the window attracted a great deal of attention. It is not at all difficult to believe this, and more. Looking at this window as through a telescope, some thousands of miles away, what we see makes us wish we had seen more, had seen the real thing, in fact. There's a symmetry and poise about the whole thing. This is the sort of

window that ought to happen when there's a prize for window-dressing in sight. We don't know who dressed this window, but whoever did had taste and ideas.

The feature of the display was a group of the famous Horter “Eldorado” drawings. The subjects of these were famous and interesting American and European buildings and architectural remains. No one passes by a Horter drawing without a second look,—and when they are to be seen in groups, groups gather to see them.



FOR success in business depend not so much on blow as on blows.



Gold Dredging

SINCE the days of '49, when the discovery of gold in California started a historic stampede to the bonanzas of the Far West, considerable advancement has been made in the method of teasing treasures from the earth. The old-time placer miner laboriously toiled with pick and pan to garner the yellow grains of gold. But the modern way is to sail around in a pond on a huge floating mill, as illustrated above, and let machinery do the work.

These marvelous dredges operate on the cut-and-fill method, so that the pond in which they float moves forward with them. In a continuous operation the gold-bearing sands are excavated, elevated, washed free of all the glittering particles of yellow metal, and the refuse is dumped overboard at the rear of the dredge. The photo at the right shows four streams

of sand and water spilling back into the pond.

The dredges operate throughout the year, and in that time handle an enormous tonnage of material. The amount of gold recovered per ton of gravel is so small as to seem hardly worth while, but that the business really is profitable may be surmised from the fact that additional dredges are being put in service from time to time. California, Colorado, Alaska, and Straits Settlements are the principal places where this type of mining is employed.

The endless bucket elevator is poked directly into the bank and digs with neatness and dispatch. This method gets results but is severe on the machinery, because the lower tumbler bearing and several of the ladder roller bearings operate in water densely charged with sand and gravel.

Tumbler bearings cost several hundred dollars each, but last only from two to three months before renewal is necessary if ordinary grease is depended upon to lubricate them. It was found out long ago, however, that the shafts will last much longer if lubricated with Dixon's Waterproof Graphite Grease. This grease is so dense and adhesive that it retards the entrance of grit into the bearings, and thereby prevents the rapid abrasion that is so destructive to these massive parts. Dixon's Waterproof Grease is also used on the wire cables.



Dixon's Stove Polish

Newark, N. J., May 19, 1921.

Gentlemen:

For a number of years my wife has used Dixon's Stove Polish on the heating appliances in our home, and we now want to procure another supply.

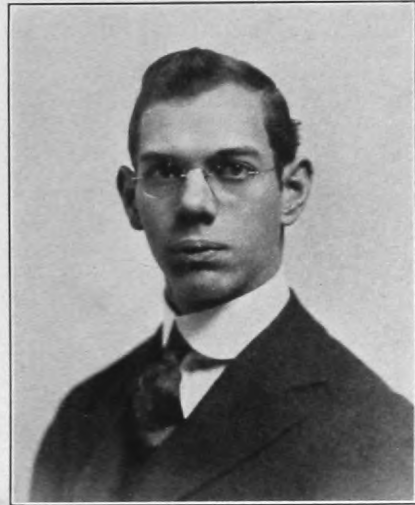
We have tried a hundred and one brands of polish, but find none so good as your old-fashioned make, and will wager that we have the best polished stove in the city of Newark.

Yours respectfully,
(Sg.) WM. FINIGAN.

◆
Helpful Hint

JONES: "I want to do something big and clean before I die."

BONES: "Wash an elephant."—
Purple Cow.



C. A. Brunger

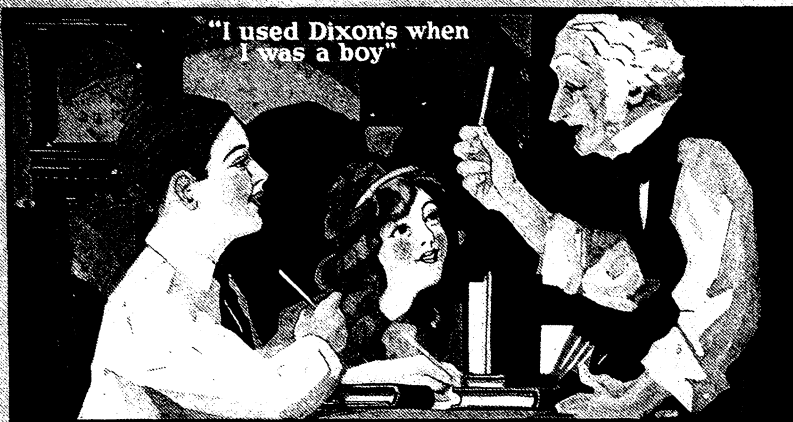
Died June 25, 1921

THE capsizing of his canoe on the night of June 25 brought to an untimely end the promising career of this young Dixonite, in his twenty-seventh year.

He came to the Dixon organization in 1916. His work in the sales end of our Lubricants Department was interrupted by the war, in which he won a Certificate of Merit for performance of duty in the Ordnance Department overseas. On his return to civil life he resumed his former position, but latterly had been assisting in experimental work in our laboratory.

To his family in their bereavement our heartfelt sympathy is extended. And to this is added the assurance that he will live on in the memory of his many friends in the Dixon organization.

The DIXON SCHOOL LINE



Beginners
308



Special Black
312



Anglo-Saxon
1810



Wedge Eraser
No. 450



Eldorado



Ticonderoga
1386



Cabinet
720

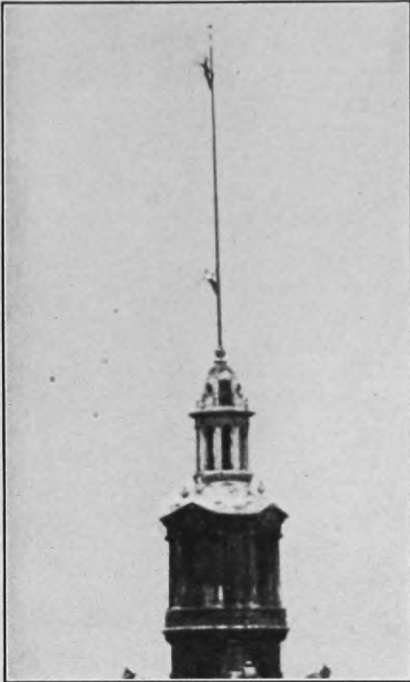


Anglo-Saxon
1840

JOSEPH DIXON CRUCIBLE COMPANY
JERSEY CITY, N. J. U.S.A. ESTABLISHED 1827

New Dixon Dealer Aid

(See page 4947)



Flagpole, Singer Building, New York City

THE flagpole is 775 feet from the ground. It was painted with Dixon's Silica-Graphite Paint in May, 1921.

Harry S. Fitch Company, of 84 Sherman Avenue, Jersey City, was the contracting painter.

This flagpole is of steel construction, with a steam-pipe going up the inside of the pole, to prevent splitting in winter.

All lower New York "rubber-necked" when *Fox News* and other newspaper cameras clicked from the Woolworth Building tower while Harry S. Fitch Company and his helpers, William Smith and Fred

Struber, performed their daring "act" with Dixon's.

Wherever there is a tough, high painting contract, the most experienced painters, like Harry S. Fitch Company, use Dixon's Silica-Graphite Paint.

Isaac Kemp Leaves Us

AFTER nearly twenty-three years of most pleasant relations, Isaac Kemp, head of our Traffic Department, severed his connection with us on May 31.

Mr. Kemp will be associated with his cousin, Mr. Roy Halsey, a former Dixonite, in the manufacture of pumice-stone, and will have charge of their New York office.



As a token of affection and esteem, his associates presented him with a gold watch and chain.

While we regret losing him, Mr. Kemp enters upon this new field of endeavor with our hearty good wishes.

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII JULY-AUGUST, 1921 No. 6

IMPORTANT NOTICE!

IT is our earnest desire to regularly place in the hands of every person or company who uses, sells, or otherwise is interested in Dixon's products, our house magazine GRAPHITE.

We ask, however, that those persons and companies now receiving GRAPHITE please advise us on the enclosed postal whether or not they wish to continue to receive our house magazine in the future, their name to remain on our mailing list.

We wish to revise this mailing list in an endeavor to eliminate those copies which are not now being delivered because of a change in address or a concern having gone out of business.

While we want every person or company having use for GRAPHITE to continue to receive it, we do keenly desire, in the spirit of the times, to eliminate all possible waste.

Will you not, therefore, please give this matter your *immediate* attention. Please fill in the postal now and mail it at once so that we may proceed with our revisions. Otherwise we may be compelled to remove your name from the GRAPHITE list.

Soliloquy : On Choosing a Salesman

WHETHER it is better
To take this one
Or that?
That's the question.
This one is
Tall ;
And hath
Impressiveness.
His way is suave. . . .
And I do see
In him
A seemly confidence. . . .
And miracles are made
Of confidence.
The other one is
Short ;
And much inclined to
Embonpoint.
He beareth no great
Burden
Of responsibility
Upon his shoulders,
But he telleth
A merrie tale
Merrilie. . . .
And hath a
Shrewd eye
In 's head. . . .

Chances are
One will do
As well as
T' other.
Both are good,
And both are
Different.
There is no way
To try the thing
Except—to try it.

And then we'll see who is the winner,
The stately one, or else the grinner.

DIXON'S No. 677 Gear Lubricant

WE have called attention to the fact that a gear box lubricant, to do effectively the work for which it is intended, must show minimum power losses in both hot and cold weather.

Tests conducted in our Mechanical Laboratory prove that *at freezing temperature the average gear lubricant will consume at least three times as much power as will Dixon's No. 677.* The average gear lubricant at freezing temperature stiffens to such an extent that the shifting of gears becomes quite a difficult matter. With Dixon's No. 677, however, gear shifting is accomplished as easily as in mid-summer.

On a hot summer day the average gear lubricant becomes limpid and leaks through the packings, while Dixon's No. 677 retains its original plastic condition.

The ability of Dixon's No. 677 to withstand extremes of heat and cold results not only in an actual reduction of the power-loss in gear boxes, but also eliminates added strains to which all working parts of a car are subjected when the lubricant is either too hard or too fluid.

Write for Booklet No. 190-G

JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.



Makers of Quality Lubricants - Established 1827



For Spur and Bevel Gears
Use **DIXON'S No. 677**
GEAR LUBRICANT

For Worm Drives
Use **DIXON'S No. 675**
GEAR OIL



The Salesmen's Book

THE Dixon "Eldorado" advertising has been so unusual and has attracted so much favorable attention that we have decided to gather the different advertisements into one volume.

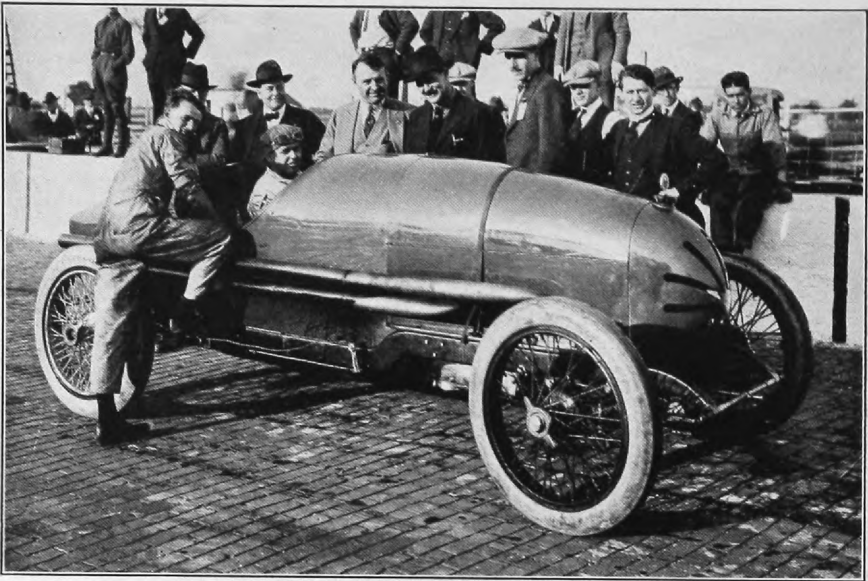
The book which is reproduced above is now on the press and will soon be ready for distribution to Dixon salesmen.



The Art Portfolio

IN response to many requests from artists and architects, we have reprinted twelve of the Earl Horter “Eldorado” drawings on cameo paper, which retains the soft technique of the original.

This edition of reprints is necessarily limited in number, but we shall be glad to send a copy gratis to our good friends on request.



Tommy Milton Wins Speedway Classic

Dixon's Lubricants Again Winners

ON Memorial Day, Tommy Milton, world champion speed racer, piloted a Frontenac Special to the finish line first in the ninth renewal of the international racing classic, the 500-mile dash around the Indianapolis Speedway.

The time was 5 hours, 34 minutes, 44.65 seconds, an average of 89.62 miles an hour, which established a new track record for cars of not more than 183 cubic inches piston displacement.

The winning car was designed by Louis Chevrolet, a veteran racing driver, thus giving him the distinction of having designed the winning car for two successive years, as the 1920 race was won with a Monroe Special and piloted by his late brother, Gaston Chevrolet.

Second place was captured by Ros-

coe Sarles in a Duesenberg Special, which came in three minutes after Milton. The other places won were: Jules Ellingboe in a Frontenac, third; Jimmy Murphy in a Duesenberg, fourth; Ora Haibe in a Sunbeam, fifth; Eddie Miller in a Duesenberg, sixth; Ira Vail in a Leach Special, seventh; Bennie Hill in a Duesenberg, eighth; and Ralph Mulford in a Frontenac, who was flagged and awarded ninth place. Of the twenty-three cars lined up for the start but nine remained through the entire contest.

Every car that finished was lubricated with Dixon's Automobile Lubricants. This is tangible evidence of their success in actual service.

An automobile lubricant that can stand the severe heat and friction de-

veloped in fast, long-distance races, must be a lubricant of unusual merit.

That Dixon's Automobile Lubricants do possess this quality is attested to by the fact that they have been the choice of world-famous drivers of other years, just as they were the choice of those who won out in 1921.

Reasons why Dixon's Lubricants are so successful are explained in an interesting booklet. Write for a copy.



Water Tank, Gaston Manufacturing Co.

Cherryville, N. C.

THE water tank shown above is painted with Dixon's Silica-Graphite Paint, the contracting painter being Mr. J. M. Sprouse, of Gastonia. Mr. D. P. McLured is the Manager of the Gaston Manufacturing Co.



Silo, Compania Molinera San Cristobal

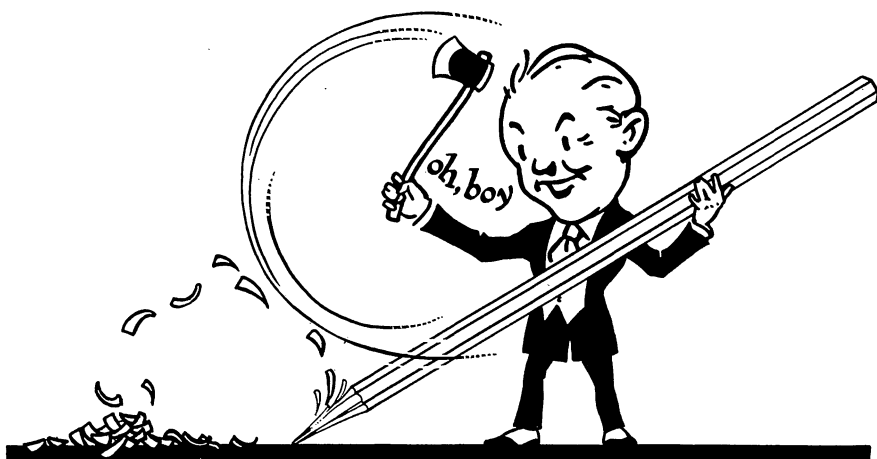
Santiago, Chile

THIS immense silo is protected with Dixon's Silica-Graphite Paint. It belongs to La Compania Molinera San Cristobal of Santiago.

Mr. J. Kirkman, Manager of that company, says: "I am pleased with the results. Dixon's is the most economical paint I have ever used. I always specify it."

Señor E. Rivera, the Managing Director of this same company, has painted the doors and windows of his new chalet with Dixon's Paint.

We wish success to the steady progress of South American and Pan-American amity with the many able and courteous citizens like those mentioned who are leaders in industry and friendship in the great nations to the south.



Concerning Pencils

HILAIRE BELLOC lists a lead pencil among the implements handed to Adam when he was given notice to quit Paradise Apartments.

These implements were given him to make his way in the world; whatever way of joy or sorrow he went, they went with him, one of them a lead pencil.

The antiquity of the lead pencil is thus announced on excellent authority.

Indeed, it requires an effort, a sort of throw-back, to imagine a world without pencils.

What could it have been like?

And yet it is true that the civilized world did go for a long time without lead pencils.

Adam must have swapped his for a drink, "or somethin'."

At any rate, ancient Greece and Rome, Egypt, Babylonia, Assyria, "the marts and scribes of Samarcand, they knew it not"; and the most assiduous, exhaustive research proves that for several thousand years after

Adam the lead pencil did not reappear on earth.

But "there's hardly a man alive to-day who remembers" when lead pencils were a thing not in use.

These fine little tools for writing and drawing, after nearly two hundred years, grow daily more and more necessary in the arts and industries.

And who minds sharpening a lead pencil? It is a pleasant process; it requires no effort, diverts no thought, is wholly mechanical.

And the easy-gliding lead,—now very soft, now harder, now harder still, as soft, as hard, as you choose,—how light and well balanced it is for writing a quick memo, for figuring, for checking, for signing this, that, and the other routine thing.

Have you ever tried to do without your favorite lead pencil for a time, using some other writing implement the meanwhile?

And then come back to it.

Oh, boy, ain't it a grand and glorious feelin'?—as Briggs would say.

Guide Post



OF a journalist whose style was of the rambling sort — starting anywhere and stopping nowhere in particular—a critic caustically observed, “So and so never had a blue pencil in his life. . . .”

The Blue Pencil is more than a blue pencil: it is a protector of time in a busy world. It intervenes 'twixt garrulity and its victim.

When the dove returned to the ark with the olive branch in its bill, Noah knew that the flood was at an end.

And the mark of the blue pencil means the flood of language has ceased, and reflection has commenced.

“Peace, peace,” it says, meaning “hold thy peace,” “belay,” “stow thy gab,” “hold thy tongue,” “collect thy wits,” “cease talking, start thinking.”

And to extend its usefulness the Blue Pencil is made in three shapes and sizes:

1. The Blue Pencil of round shape and size,—Dixon’s “Best” No. 350; this entreats silence.
2. The Blue Pencil of hexagon shape and large diameter,—Dixon’s “Best” Blue No. 327; this commands silence.
3. The Blue Pencil of round shape, mammoth size,—Dixon’s

“Best” Blue No. 818; this enforces silence.

Do we hear you say that a Blue Pencil is useful in other ways?

Oui, oui, monsieur, it is of a certainty useful in other ways.

But this is a short column, and, well, to be honest, we’re afraid of *THE EDITOR’S BLUE PENCIL*.

Salesmen’s Book

(See page 4940)

THE third edition of the Dixon ELDORADO Salesmen’s Book is illustrated on page 4940 of this issue.

This portfolio tells the story of the present ELDORADO campaign in magazines, engineering, art, business, and general.

Every Dixon salesman as he calls on his customers will carry this portfolio, containing, as it does, the most convincing proof of the effectiveness of the Dixon campaign at work to reach consumers of lead pencils in shop and mart, in factory, in office, in college, and in universities, and in the primary, secondary, and high schools of the continent.

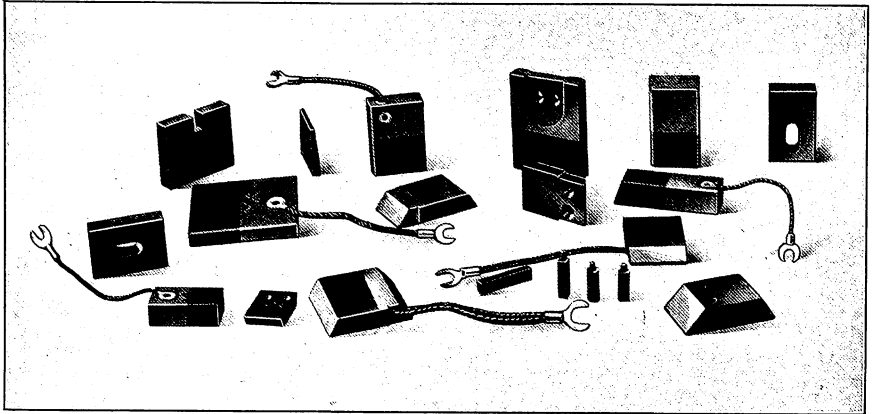
The edition of the portfolio is a limited one,—only enough copies have been printed to supply our own salesmen in this country and the salesmen of our agents abroad.



Necessarily So

“I WONDER if they take children in these apartments.”

“They must. Some of the rooms aren’t big enough for a grown person.”—*Washington Star*.



Dixon's Graphite Motor Brushes

THESE brushes are of the same high quality that characterizes all the products of Dixon manufacture. Only the best of natural graphite is used, no harsh carbon whatever, and hence the brushes are self-lubricating and non-abrasive. Commutators that are smooth when Dixon's Brushes are first applied will remain so indefinitely, since graphite cannot scratch copper. This fact in itself deserves careful consideration in many plants where it has been necessary, as the result of the grinding action of the brushes used, to frequently turn scored commutators to a true surface.

Dixon's Brushes are made in only one grade, which combines the best features of most other brushes. It is, therefore, not necessary to study a lot of technical data to determine what kind of a brush to order. In all cases where the maximum load is not over 42 amperes per square inch of brush cross-section, Dixon's Brushes are recommended. There are but few motors or dynamos in stationary ser-

vice which cannot be operated more satisfactorily with them than with brushes of any other type.

They should not be used on motors of electric railway cars, electroplating machines, or the electrical equipment of automobiles.

When Dixon's Brushes are properly adjusted to commutators, they will last a remarkably long time, without sparking or squealing. What is more annoying than the monotonous squeal of hard brushes on swiftly revolving copper, and what is more foolish than to listen to it day after day! A set of graphite brushes will usually cure the trouble at once.

Dixon's Brushes are not expensive. You will probably be surprised to learn how reasonably they are priced. And when one further considers how long they last and their excellent commutation, the economy is even more apparent.

Another decided advantage of graphite brushes is that they operate with less friction on the commutator,

and therefore do not cause as much mechanical drag as brushes of a different character.

Their good points may be summed up briefly:

Self-lubricating	Reduce friction
Non-abrasive	Operate quietly
Non-sparking	Inexpensive
Durable	Dixon quality

We are always glad to place our experience at the disposal of any user of Dixon's Graphite Brushes. Problems that may arise can be submitted to our electrical department, which will give personal attention to individual cases.

A New Dixon Window Sign

WHEREVER school pencils are bought and used you will find both buyer and user well acquainted with what every one refers to as "The Dixon School Line."

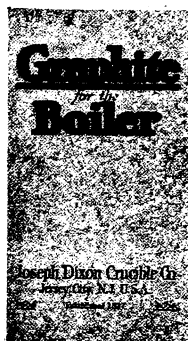
This has been true for a great many years, and the artist took this as his central idea when making the drawing for the new School Line Window Card and Poster which is reproduced on page 4936.

This poster identifies the dealer with the best known and most widely used Dixon School Line. It is being prepared for distribution to the trade.

Have you received your copy?

Dixon's Motor Chain Compound

WITHOUT an equal for lubricating automobile driving chains. When chain is cleaned and immersed in the melted compound, no other external or internal applications are necessary. The compound may be used repeatedly. Prevents rust and wear.



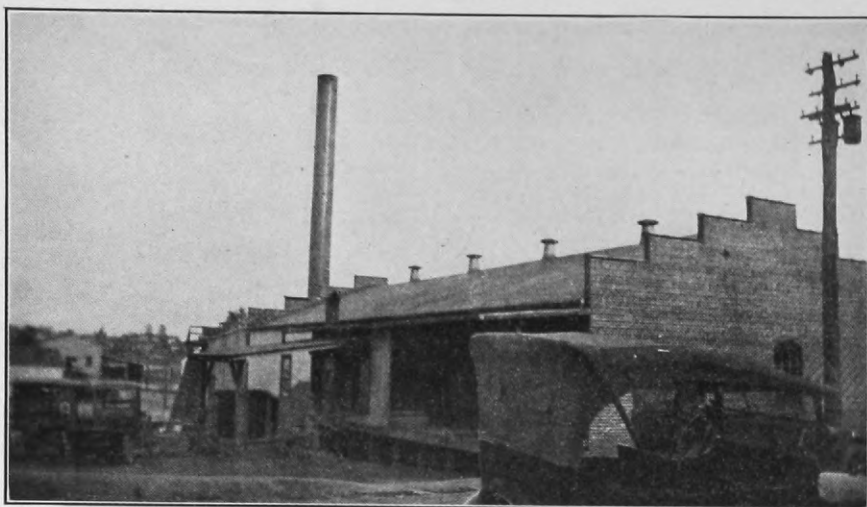
This Booklet Will Help You

EVERY ONE knows that to some extent all waters contain mineral or vegetable impurities, and that many of these impurities are left behind in boilers in the form of scale when the water is evaporated.

It is further known that scale in boilers lowers the conductivity of the boiler heating surfaces, and increases coal consumption materially. One sixteenth inch of hard scale reduces the efficiency of a boiler fully 12 per cent., and one eighth inch of scale reduces the efficiency fully 18 per cent.

The action of graphite is not chemical, nor does it attack the metal; neither is it affected by any acid in the water or by the heat generated in the boiler. Particles of graphite simply work through the minute fissures existing in the old scale and gradually penetrate between the scale and the metal. The scale thus loosened may be rapped off and removed with little trouble.

Our booklet "Graphite for the Boiler" shows how graphite works and why it is a better scale remover.



Smoke-stack, Adams Ice & Coal Company

Gastonia, N. C.

ICE for kitchen-comfort in our balmy South, and coal for its new great industries.

We illustrate the smoke-stack of the Adams Ice & Coal Company. Mr. R. H. Adams is Manager.

The smoke-stack is painted with Dixon's Silica-Graphite Paint. The painting contractor was Mr. J. M. Sprouse, of Gastonia. Mr. Sprouse's "brush work" and Dixon protective service are favorably known all over the Southern States.

Hope vs. Evidence

At the grave of the departed the old darky pastor stood, hat in hand. Looking into the abyss he delivered himself of the funeral oration.

"Samuel Johnson," he said sorrowfully, "you is gone. An' we hopes you is gone where we 'specks you ain't."—*American Legion Weekly*.

Art Portfolio

(See page 4941)

THE ELDORADO Art Portfolio contains reproductions of the famous Eldorado-Horter drawings on cameo paper, which retains the soft technique of the original drawings.

College professors, artists, art students, students of architecture, and students of engineering have written us in praise of these drawings.

Most of them have wanted to secure copies for study at home or in classroom.

A set of these reproductions is now available.

◆

THOSE who can, make;
Those who can't, save.

◆

The Apple Coats and Suits

ONE clothing merchant uses the apple as a trade-mark. He claims there wouldn't have been any clothing business if it hadn't been for an apple.
—*Wampus*.

Melting Brass in Crucibles

THE natural desire on the part of those required to make a decision on the question of an electric furnace installation for brass melting, is to obtain comparative cost figures showing the cost per pound of melting with the electric furnace, oil or gas reverberatory, and the crucible method. Yet such figures mean nothing unless they cover conditions and practice exactly similar to the conditions prevailing in the case under consideration. It might cost a foundry making occasional orders for special castings 5 cents a pound, whereas a manufacturer of valves who has standard patterns, molding machines, and is operating under quantity production conditions, can often show a cost of from $\frac{3}{4}$ to 1 cent a pound. The conditions in a foundry are entirely different from those in a casting shop of a rolling mill. Even in the casting shop, melting conditions vary to a great extent; casting extrusion billets is an altogether different proposition from casting small bars of special alloys such as phosphor-bronze, nickel alloys, etc.

The following table, however, is offered as an indication of how comparative costs with the electric and crucible furnace run. The figures on crucible practice were actually obtained in the casting shop of a rolling mill, and the cost figures on the electric installation were obtained from data published by different electric furnace manufacturers. The electric power rate varies, of course, very widely. Occasionally it is as low as 1 cent per K.W.H., but usually is about 3 cents per K.W.H., and very often higher.

ELECTRIC FURNACE

Production per day, 10,000 lbs. Alloy, "High Brass," 66% Copper.	
Power	300 K.W.H. per ton, 1500 K.W.H. at 3 cents..... \$45.00
Labor	1 Furnace tender at \$7.00..... \$7.00 2 Mold men at \$4.00..... 8.00
	15.00
Zinc Loss	1% of 10,000 lbs. at 6 cents.. 6.00
Supplies	\$1.00 per ton..... 5.00
Repairs	\$1.00 per ton..... 5.00
	Interest and depreciation, initial investment, \$15,000. Interest at 7%, \$1050. 250 working days 4.20

Depreciation, 20% per annum.	
20% of \$15,000, \$3000. 250 working days	12.00
or .922 cents per pound.....	\$92.20

CRUCIBLE PIT FIRES

Production per day, 9000 lbs. Set of 10 Fires. 5 Rounds, 50 Heats. Alloy, "High Brass," 66% Copper.	
Fuel	3600 lbs. of coal at \$11.00 per ton \$19.80
Labor	1 Caster at \$10.00..... \$10.00 3 Men at \$5.00..... 15.00
	25.00
Zinc Loss	1.3% of 9000 lbs.—117 lbs. at 6 cents 7.20
Supplies	Crucibles, 3 at \$7.00 (in car-load lots this price would be considerably less) 21.00
Repairs	50 cents per ton..... 2.25
	Interest and depreciation, initial investment, \$5000. Interest at 7%, \$350. 250 days..... 1.40
	Depreciation, 15%..... 15% of \$5000, \$750. 250 days..... 3.00
	\$79.65
\$79.65/9000—885 cents per pound.	

It will be observed that in this case the cost per pound is considerably in favor of crucible melting. Cost figures, however, do not tell the whole story. There are many conditions where electric furnaces or any other type of large capacity furnace are not at all satisfactory, aside from purely cost considerations. It seems to me desirable to summarize the disadvantages here.

A. With few exceptions, all existing types of electric furnaces are reverberatory furnaces of fairly large capacity. The fact that electricity is the source of heat does not alter the fundamental type of the furnace, nor does it materially add to its advantages. This fact is important and is generally lost sight of. The fundamental question is not the relative advantages of electric furnaces over all other methods of melting brass, but is really the relative advantages of the large capacity tilting furnace and the crucible method. The problem therefore really is an old one and existed long before electric furnaces.

Space forbids the presentation of the details of this old question, but it may be stated without argument that the advantages of the crucible method over the large capacity reverberatory furnace for

certain conditions are just as valid to-day as they ever were, even though the large capacity furnace is electrically heated. These advantages are flexibility and metallurgical control.

B. Cost of electrical equipment is from 3 to 15 times that of coal, oil, or gas equipment.

C. Cost of power is usually several times that of solid and liquid fuels, and in dull periods, shut-downs, etc., the power contract runs on just the same with penalties and carrying charges (in figuring power costs, this point should be kept in mind).

It is frequently claimed that the electric furnace eliminates ash handling and treating, high zinc loss, crucibles, and defective metal. Ash handling is only necessary with coal pit fires. This disadvantage is also eliminated through the use of oil or gas for fuel, either in crucible or reverberatory furnaces, and elimination of ash handling is not peculiar to electric furnaces.

Zinc loss depends entirely on the concentration of zinc in the alloy, temperature, and time, and the type of furnace or fuel has little to do with the problem. A badly designed installation, whether electric or fuel fired, will certainly tend to increase metal loss, but nine tenths of it is due to the human element and the method of operation.

Crucibles are not required with oil or gas reverberatory furnaces, but the elimination of crucibles does away with all the well known advantages of the crucible process. Defective metal is almost invariably due to manipulation. Better metal can be obtained with crucible practice than with any other method of melting, and that this is generally recognized is evidenced by the wide-spread use of the crucible process for the production of the best grades of non-ferrous alloys and steel.

Fuel conservation may not be of much interest to the individual manufacturer, but the problem is certainly of vital interest to the nation, and the choice of fuel and equipment for any industrial heating problem should be governed to some extent by the principles of conservation.

It is unnecessary to elaborate in detail the waste of energy involved in the generation of electricity from coal for melting metals.

Improvement of crucible practice through the use of gas, of various types, in crucible furnaces will result in cheaper and better metal, and will be much more in line with the broad principles of fuel conservation than electrical developments. There are other strong reasons for the use of gas fuel in the brass industry, especially in brass rolling mills. Gas is an excellent fuel for annealing furnaces and for steam boilers. If the size of the plant justifies the investment, by-product recovery can be practised, which means enormous reductions in fuel costs. The rapid increase in the use of gas and in the number of by-product coal plants in recent years, especially in the steel industry, is a subject which brass manufacturers have badly neglected.

In conclusion, I believe that the furnace must be designed to suit the work; that it is not possible to sell standard furnaces for any purpose from stock, whether they are electric or fuel fired, and get the best results; that the use of electricity for heating, except in special cases, is not in line with fuel economy and conservation, and that the use of gas fuel offers great possibilities.—EQUIPMENT ENGINEER, in *Metal Industry*.

Did You Get Your Copy?

WE still have a sufficient quantity of the pamphlet "Useful Spanish Words and Phrases" to send a copy to all of our readers who have not already requested one.

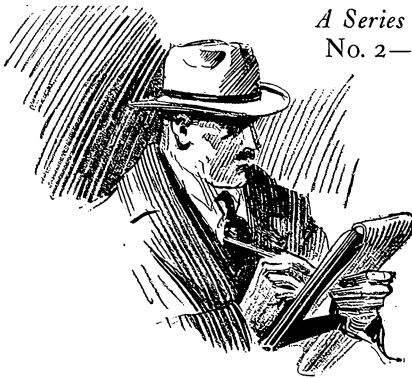
If you are a teacher or connected with a school and wish to obtain enough copies for your classes, please let us know how many you have use for, and they will be sent.

This booklet was prepared especially for travelers' use, but will also prove to be of great assistance in classrooms.

READY!



*A NEW DIXON
PENCIL DE LUXE*



A Series of Pencil Portraits
No. 2—THE SALESMAN

PITY the poor salesman!
They used to give him any
stray nondescript pencil that
happened to be handy. The
cheaper the better!

One day they couldn't read his
orders. The battle raged. Then
this compromise: "Give me a
good pencil and I'll guarantee
the neatest orders you ever saw."

That day the purchasing agent
gave him a

**DIXON'S
ELDORADO**
"the master drawing pencil"

*Dixon's Eldorado
is made in 17
leads—one for
every need or
preference.*

Reproduction of one of the "ELDORADO" adver-
tisements, *Saturday Evening Post-Literary Digest*
series, 1921 campaign.

DIXON'S "ELDORADO"—the master drawing pencil

**Write for
These Good
Booklets**

One is called
"FINDING
YOUR PEN-
CIL"—a pencil
service booklet
for every one
who uses a pen-
cil. Write for
it. It will help
you choose ex-
actly the right
pencil for your
particular work.
Also write for
our booklet—"A
Study in Sepia."
It shows the
character of work
that can be
done with DIX-
ON'S "BEST"
Colored Pencils.

TN
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V. 2
1921

Graphite

VOL. XXIII

SEPTEMBER-OCTOBER, 1921

No. 7



JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



**Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead**



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Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

SEPTEMBER-OCTOBER, 1921

Number 7

DO YOU WANT FUTURE ISSUES OF GRAPHITE?

If so, you may have them *without charge or obligation* by simply filling in and returning the enclosed post-card.

Please be very sure to fill out this card completely, as we wish to thoroughly analyze the circulation of GRAPHITE.

A very small percentage of the cards sent out with the previous issue has been returned, so this opportunity is given to those who wish to continue to receive this magazine.

If you are not sure whether you returned the previous card fill in another.

*Your name will be removed from the mailing list
unless you notify us to continue it*

MAIL THE CARD NOW!!!

The Fountain of Neptune at Trent

(Drawing made by Earl Horter with
ELDORADO, "the master
drawing pencil")

IN Trent

So old and beautiful and peaceful—

Lying in the valley

As a sea-gull calmly rests

Amid appalling storm-tossed crests—

Plays a fountain.

There, far away from sea,

Its god Neptune stands undaunted

In a strange land.

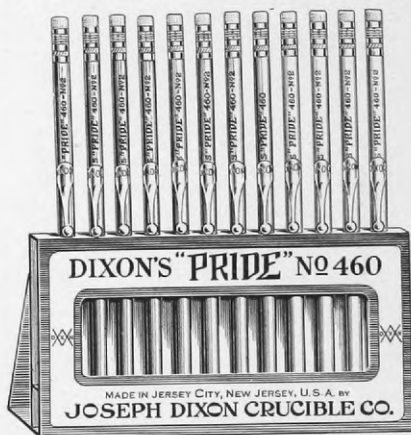
On every hand

The landsmen go,

And Time beats slow,

A gentle, tinkling measure.

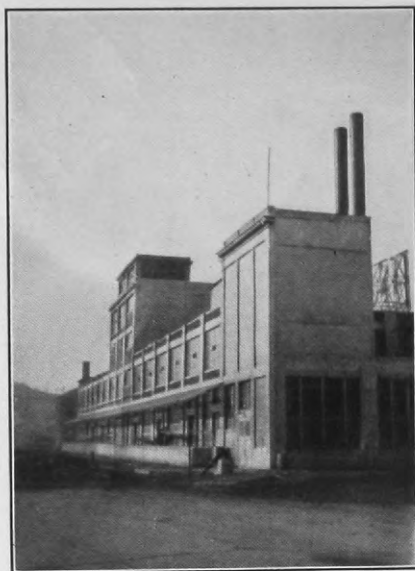
New Dixon Assortment



"Pride"—a dozen assortment to be proud of—hence its name.

Easel box, round rubber-tipped pencils, four each, red, blue, and green—with pencil clips.

The quality of the pencils matches up with the name, PRIDE No. 460.



Ginger Ale Plant, Beech-Nut Packing Co.

Canajoharie, N. Y.

THIS is the ginger ale plant of the world famous "Beech-Nut" Packing Company of Canajoharie, N. Y. The smoke-stacks and all exposed metalwork are painted with Dixon's Silica-Graphite Paint, the best and most popular protective paint all around a factory for doors, stacks, fire escapes, fences, tanks, metal roofing, anywhere and everywhere that rust and dampness have to be defied.

Careless

THE motor-car of to-day is a splendid example of scientific progress. And yet careless pedestrians are continually spoiling its delicate machinery with small pieces of themselves.—*London Opinion.*



Jack Lewis

Late Southeastern District Sales Representative of the
Joseph Dixon Crucible Company

JACK H. LEWIS died at his residence, 2 Peachtree Place, Atlanta, Ga., on Monday, August 8, 1921, at the age of forty-six years. His death is a distinct loss to the commercial world and hosts of friends and acquaintances.

About four years ago he underwent a very serious operation, and early last winter had a complete nervous breakdown. From the first of May until the middle of June he was in the hospital, and after his removal home this protracted siege left him in an extremely weakened condition.

Mr. Lewis was a native of Wilmington, N. C., but for over fifteen years had made his home in Atlanta, and was Vice-President of the Atlanta North Carolina Society.

On December 1, 1909, after having been with the Tower Manu-

facturing and Novelty Company as southern representative for about eighteen years, Mr. Lewis became the southeastern representative of the Dixon Company, with headquarters at Atlanta. A short time after, he established the Atlanta office as headquarters for the Southeastern District.

He was prominently concerned in many local movements. As a charter member of the Atlanta Rotary Club and secretary for one term, he was a large factor in its organization and helped to make it a power for good.

There are few men in Atlanta whose personal popularity was greater than Mr. Lewis'. His charm of manner and high ideals of friendship won for him the love of every man who was for long associated with him, and his passing is as sincerely as it is universally mourned.

Read, Stationers, Read



Rallying Cry for the Big Convention

Advance reports indicate that the big Convention of the National Association of Stationers and Manufacturers of the U. S. A., to be held at Atlantic City on October 10, 11, 12, and 13, will outrival in interest and helpfulness all other conventions of this organization.

"1921 Will Reward Fighters." This is the battle-cry under which business has rallied to the colors all over the country. This best expresses the spirit dominating the many activities of this Association.

"There's more to 'fighters' than fighting; there's comradeship, coöperation, the help in the 'shoulder-touch.'" Working together for mutual good, on the platform of the Square Deal, has resulted in more and better business—the victory which follows steady *plugging* for the common good.

Close coöperation between the National Association and its individual members has had the effect of strengthening the morale of the organization.

Election of officers for the coming year—ways and means of further developing the business of individual members—are chief among the plans of procedure in this great annual get-together.

And to those whose names and personal endorsement the roster has so far missed, we urge action.

Above all, come to the Convention; get the "shoulder-touch"; fall in line!

*Courtesy Automotive Industries*

Murphy—Duesenberg—Dixon

A GOOD driver, a good car, greased with a good lubricant, makes a hard trio to beat, so Jimmy Murphy, in a Duesenberg car greased with Dixon's Lubricants, won the Grand Prix, French Classic, in France, July 25. This race marked the revival of long-distance road-racing in France.

Murphy led in most of the thirty circuits of the course and finished the 323.5 miles in 4 hours, 7 minutes, and 10 seconds, averaging 78.5 miles an hour. He took the lead in the fifth circuit, and in the seventh broke the course record in 7 minutes, 43 seconds. Murphy won the gold medal of the Automobile Club of France.

Ralph De Palma, in a Ballot, was second, 4:32:10, winning a silver gilt medal, and Jules Goux, in a Ballot, third, won a silver medal. Andre Dubonnet, a rich amateur driver of a Duesenberg, was fourth, and Al-

bert Guyot, also in a Duesenberg, was sixth.

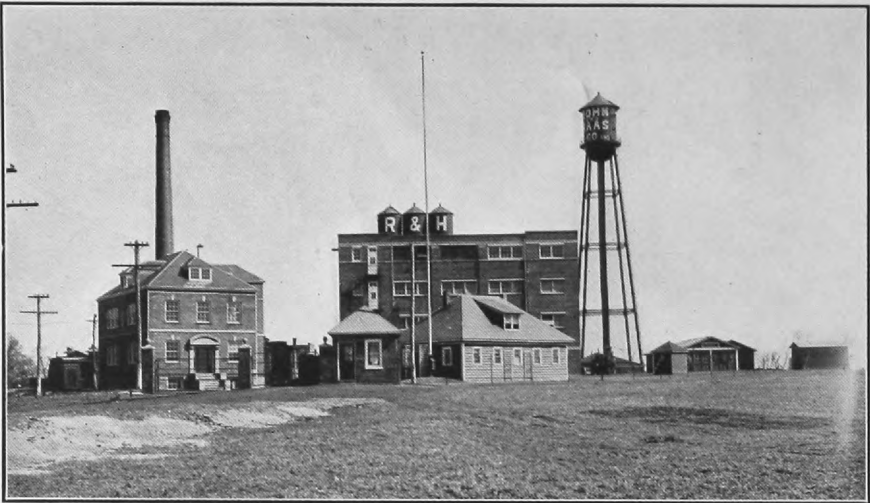
Jimmy Murphy is a Pacific coast product. He began as mechanic for Eddie O'Donnell, and later was with Rickenbacker and others. He qualified as a pilot in 1917, and in February, 1920, won the 250-mile race in Los Angeles. On April 10, 1921, he broke the world's record for cars of 183 cubic inch displacement.

Murphy has always been a Dixonite when it came to the lubrication of his racing cars. He says: "I have all the confidence in the world in Dixon's Lubricants, both for racing and touring cars."

The following cablegram received from Murphy tells us in a few words the story of the Grand Prix:

"Won French Grand Prix greased throughout with Dixon's Lubricants.

"Jimmy Murphy."



Water Tower and Tanks, Rohm & Haas Co.

Bristol, Pa.

THE three water tanks and the tower on the main manufacturing building of the above chemical company's plant are painted with Dixon's Silica-Graphite Paint.

Dixon's Paint is much used in similar plants of other concerns. It is a service paint as contrasted with a "lower-price-per-gallon paint."

Service

SERVICE is the only true measure and criterion of cost.

Don't put your judgment into the leaky colander called "cheaper per gallon."

If Dixon's Silica-Graphite Paint lasts longer, and saves labor charges for repainting, then Dixon's is the one and only paint to use in the first instance.

Facts about Asbestos

THE fiber of the best grade of asbestos is beautiful and silky and has great flexibility, elasticity, and tensile strength, according to the United States Geological Survey, Department of the Interior. It can be spun into thread so fine as to run 225 yards to the ounce, and as it is incombustible as well as a nonconductor of heat and electricity, and resists the action of most ordinary acids, its field of use is large. The possible applications of asbestos are far from fully appreciated, not only by the general public but by manufacturers who are in search of material for special uses to which asbestos may well be applied. Perhaps it is most generally used to make fireproof cloth for theater curtains. Everywhere in cold countries it is extensively employed for covering furnaces, boilers, and pipes to prevent loss of heat. Asbestos is a good insulator.—*Gas Age-Record*.



Window of H. S. Crocker Co., San Francisco, Cal.

Dependability

DEPENDABILITY is the anchor that holds the ship in every storm, the friendship that never fails in times of stress, the promise that is never broken, no matter what the cost.

Dependability is something you can hang on to, come what may; without it, hope is an illusion and expectation a disappointment.

Have no commerce with men who are not dependable, else you also may fail in your engagements and outlive your reputation.—*The De Vinne Press.*



Before and After

"Do you know what it is to go before an audience?"

"No. I spoke before an audience once, but most of it went before I did."—*The Christian Advocate (New York).*

Is It New?

WE found on our Treasurer's desk the other morning a letter from a customer which reads as follows:

"Beg to state that necessity is the mother of invention, and as everything went to sticks, we invented the process of not paying our bills until something turned up. We turned up something and we are happy to hand you check herewith."

To which our Treasurer replied as follows:

"Your favor received and noted. If you are the inventor of the process you mention, you are certainly entitled to big royalties, because everybody seems to be using your invention."



Did you send the Post Card back?

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII SEPT.-OCT., 1921 No. 7

"Yours is as Fair a Name"

FORD, Wanamaker, Edison, Marconi! Names "to conjure with," in realms mercantile and scientific of our times.

Names not made by printer's ink.

Names that will live long after their bearers pass the way of all flesh.

What is the trait that marks out their owners among the multitude?

We think all great men of business, of science, of art, of letters are largely so by their enthusiasm, through their earnestness.

"There is no substitute for downright, thoroughgoing earnestness."

It is the misfortune of the thoughtless to be triflers, with no care for the game: indifferent so it be soon ended.

And sweeter far than all things heard to their ears is the whistle or gong that breaks and later ends the day.

But you don't score that way.

And the fellow whose heart is in the game; who wants to *win*; whose enthusiasm is a burning flame lighting him onward and upward: he is the man for keeps.

There is never any doubt as to his being kept on the pay-roll.

Business may sicken and the ax be swung.

But the man or the woman who plays the game with a vim *stays on*.

As names go, "yours is as fair a name," as those that head this article.

Whether your reward will be as great as theirs will greatly depend on your enthusiasm.

An Extraordinary Bequest

WE hear from time to time about corporations being without souls; and it is a more or less common statement that gratitude is one of the rare human characteristics. The following extraordinary experience would seem to indicate that at least some corporations are not wholly soulless, and that at least some persons have a highly developed sense of gratitude.

Miss Louise R. Darling, daughter of the late Samuel E. Darling, died on May 30, 1921, at her late residence in Sparta, N. J. When her will was probated, it was discovered that she bequeathed to the Joseph Dixon Crucible Company five bonds of the New Jersey Title Guarantee & Trust Co., each in the denomination of one thousand dollars. This very unusual bequest by Miss Darling was made, we are advised, at the special request of her father, who was formerly the Cashier of this Company.

Samuel E. Darling entered the Dixon employ in the year 1887, and he actively filled the position of

(Concluded on page 4968)

Transmission Gear Box Lubrication

FOR some time past we have been conducting tests in our Mechanical Laboratory on transmission gear box lubricants.

Results of these tests disclose some very interesting and valuable information covering the performance of gear box lubricants under unusual conditions.

One of the most interesting is the fact that even though a transmission gear box be subjected to the most severe conditions, it still remains a very efficient piece of mechanism, if properly lubricated.

Satisfactory lubrication of a gear box is clearly indicated by the power loss resulting with a certain lubricant. Employing Dixon's Gear Lubricant No. 677 and transmitting 30 H. P., the power loss in third speed was 1.28 H. P. This was 30.5% less than the power loss measured with another well known gear lubricant not of Dixon manufacture.

More complete details of these tests will be sent to automotive engineers upon request.

Write for Booklet No. 190-G

JOSEPH DIXON CRUCIBLE CO.

Jersey City, N. J.  Established 1827

MAKERS OF QUALITY LUBRICANTS

For Spur and Bevel Gears use Dixon's Gear Lubricant No. 677

For Worm Drives use Dixon's Gear Oil No. 675

For Universal Joints use Dixon's Grease No. 672



Everett Waddey Co.,
Richmond, Va.

"ELDORADO"-
WINDOW



Cunningham, Curtiss & Welch Co.
Los Angeles, Cal



**KEUFFEL & ESSER
DISPLAYS**

*The H. Lieber Co.,
Indianapolis, Ind.*



*Stevenson & Foster Co.,
Pittsburgh, Pa.*



Isaac Upham Company, San Francisco, Cal.

About Dressing Windows

A WELL-DRESSED window is more than a mere bid for the wandering attention of the passer-by. It is an invitation to stop, consider, and enter your store, bent on a purchase.

What attracts Everyman and Everywoman in a window display is the element of beauty: the beauty of contrasting or harmonizing colors, of exquisite shades of drapery, hangings, trims, and of the goods themselves often, or the boxes in which they are packed, or the labels on these boxes. Whose eye does not delight in color? Get color into your windows,—but be sure to get it in in the right way. Have each color helping the other.

An element of beauty is arrangement or design. Build up your window with the heavier masses at the bottom; beware of flatness. Make your background something against which the contents of the window

stand out. And keep this before you: an over-crowded window is not alluring. The passer-by who has time enough to make anything out of such a window will be the kind rich in unspent time only, and having nothing wherewith to buy from you.

An element of beauty is simplicity, which latter the foregoing paragraph touches on. Make your window simple. Do not fill it with unrelated materials. A window dealing with writing materials should deal with nothing not considered writing materials.

Speaking of simplicity in dressing windows, and of beauty arising out of arrangement or design, refer to page 4967, which shows a reproduction of a window in the store of Will H. Zaiser, Des Moines, Ia. Not much imagination is needed to complete the picture, especially if you know the colors.

A very beautiful display was that in the window of the Upham Stationery Company, of San Francisco,



Will H. Zaiser Specialty Co., Des Moines, Ia.

shown on page 4966. Although the window is pretty well filled, there is a coherence of content which is impressive.

The use of materials of a kind for one particular use, though these materials differ in themselves, is shown in the ELDORADO-Keuffel and Esser windows of Everett Waddey Company, of Richmond, Va., the Stephenson-Foster window, Pittsburgh, Pa., the H. Lieber Company, of Indianapolis, Ind., and Cunningham, Curtis & Welch Company, Los Angeles, Cal. (see Center Spread). The displays were judiciously handled as to spacing, arrangement, and design. And the result was a marked stimulation in the sales of articles displayed, which, after all, is the test of a good window.

The H. S. Crocker Co., San Francisco, Cal., wholesale and retail stationers, centered the interest in their window (see page 4961) on a display of ELDORADO—"the master drawing pencils," and a set of pencil drawings by the famous artist Earl Horter.

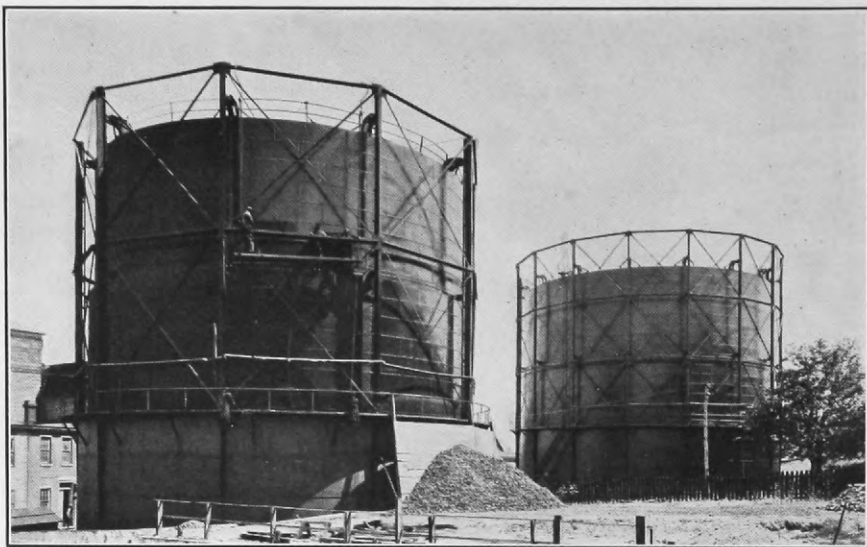
Let your displays be seasonable, in time for the big rush, just before schools open in the fall, for example.

Be economical wherever else you will, but not in your windows. They are too likely to be regarded as the index of what is to be found within your store to skimp on their dressing.

Do not allow a window to remain long enough to get "stale" and the goods themselves injured by sunlight or dust.

And remember that all manufacturers of nationally advertised goods have signs, show-cards, posters, displays of all sorts and descriptions, designed by artists and experts, for your window, to help you move your stock. Do not keep these signs in an out-of-the-way place, unseen by any one except "the mice and sich like animiles." Use them, and when they are used up send for another lot. The manufacturer has them in abundance, but he will not force them on you. If the salesman who takes your order doesn't think of this material, mention it to

(Concluded on page 4972)



Gas Holders, Bridgeton Gas Light Co.

Bridgeton, N. J.

"JOSEPH DIXON CRUCIBLE
COMPANY:

"Several years ago, after extensive tests, we adopted Dixon's Silica-Graphite Paint for our gas holders and all outside work, including boiler stack, condensers, tar storage tanks, piping, etc. We tried out quite a few other paints, but feel we get the best service from Dixon's. We do not know just how long it would stand up, because we *never permit any of our ironwork to go until it 'needs painting.'*

"We have adopted the practice of painting everything once in every four years. We pay the painter by the day and inspect his work ourselves. The result is—a perfectly satisfactory job—done at a fairly reasonable cost, and one with which we only have to

concern ourselves once in every four years.

"(Sd.) JACOB B. JONES, Supt.,
"Bridgeton Gas Light Co."

An Extraordinary Bequest

(Continued from page 4962)

Cashier until 1906, when, at the age of eighty, he retired. In consideration of his long, faithful service, Mr. Darling, however, was continued on the Dixon pay-roll until the date of his death, January 13, 1914.

The directors, officers, and officials of this Company have been deeply impressed by this striking illustration of the feeling of loyalty and affection engendered in its employees by the humane and fair policies of the Company, and this sentiment has in turn contributed largely toward the success of the Dixon business.

"Guide Post"



WE are looking out on a polished floor.

"There's music in the air."

The lights are on full-tilt.

The room itself is large, and gaily decorated.

It is pretty well filled with

persons of both sexes.

Every one is having a good time, even though every one is dressed in his (or her) Sunday best.

It doesn't require much knowledge or imagination to tell at once that we are looking on at a dance.

"Looking on," did we say?

Oh, very much more than a mere onlooker at a dance are we.

Very much.

What?

Where do we come in at a dance?

We come in, little one, with the programs.

Every one has been concerned more than a little as to whether or not we would be on hand; and how we would look when we got there.

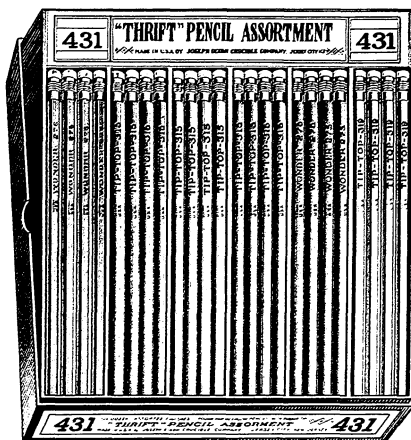
We are small, but My Lady uses us to spread joy and gloom withal.

Who are we?

We are Dixon's PROGRAM Pencils.

And we are AT HOME when the band plays and the rhythmic swing of the dance is on.

New Dixon Assortment



"THRIFT" is the name and 431 is the trade number of a shining new Dixon Assortment Box. The container is a compact box with convenient lift-off lid; both the lid and the container are made of gray glaze paper with yellow gloss trim. The pencils are round and hexagon, rubber-tipped, and finished in red, yellow, green, and light blue, assorted, dozens of solid colors.

And the price is just as attractive.

Why There Are Not More Executives

"I HAVE a fine organization," said the president of a large concern the other day, "a fine group of young, energetic executives. They know all there is to know about expansion and inflation, but not a damn one of them knows anything about deflation."—*Exchange.* ♦

**Did you return the
Post Card?**



· THE FIRST NATIONAL BANK OF JERSEY CITY ·
JERSEY CITY - NEW JERSEY

· ALFRED C. BOSSOM ·
· ARCHITECT ·
· 680 FIFTH AVENUE, N.Y. CITY ·



First National Bank Building

Jersey City, N. J.

THE "Bankers' Magazine" of New York, February, 1921, issue, publishes a full account of this fine building, so we will condense facts in this sketch.

The First National Bank Building is the finest banking structure in Jersey City, a fitting monument to its former presidents, the late E. F. C. Young and George T. Smith, and its present president, the Honorable E. I. Edwards, Governor of the State of New Jersey.

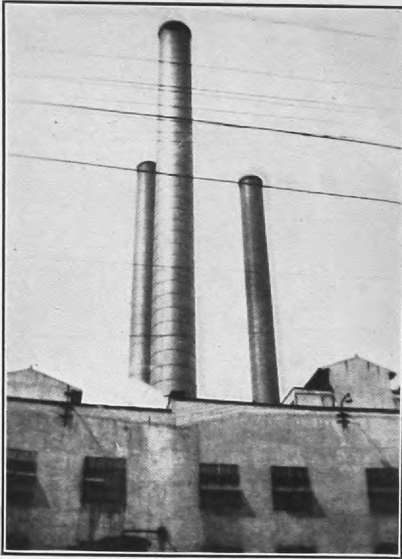
The architect is Alfred C. Bosom, known as a designer of the neat and the serviceable. John Lowry, Jr., is general contractor; Bigelow & Nichols, steel erectors; American Bridge Company, fabricators; W. W. Farrier Company, plumbing; Arthur Greenfield, Inc., metal furring.

Dixon's Silica-Graphite Paint protects all the structural steel, iron, etc., contained in this building, it having been used for both shop and field coats. Dixon's Pipe Joint Compound was also used by W. W. Farrier Company on all piping installed.

The strikingly neat and dignified building is ten stories high, and contains 1400 tons of steel; it is built of granite in lower section, brick and terra cotta above, and has a unique black and gold marble vestibule, with monumental marble staircase leading down to huge and elaborate safe-deposit vaults. No other bank has more elaborate conveniences for business and comfort: many consulting rooms; large banking foyer in front of twelve tellers' cages; mezzanine floor; public and private elevators; security vaults; bullion lift; clerks' and private dining-rooms; mechanical ventilation; telephones in vaults in case of accidental locking in. As eternal as the Pyramids and as convenient as imagination could wish is the immense vaulting system, covering general vault, twenty large individual and thousands of small safes.

The First National Bank will occupy the lower floors. The bank has deposits of \$11,828,210.47; surplus \$800,000; undivided profits of \$599,001.43; bonds of \$2,602,730; real estate and securities of \$1,113,503.63.

Great as is Jersey City now, it stands at the threshold of further greatness, and the First National Bank and its famous presidents have always been in the forefront of Jersey's progress.



**Smoke-stacks, Kentucky
Coke Co.
Louisville, Ky.**

WE illustrate above the smoke-stacks owned by the Kentucky Coke Company, a subsidiary of the Louisville Gas & Electric Company, Mr. Davies, Purchasing Agent. These smoke-stacks were painted with Dixon's Silica-Graphite Paint, by H. Fraser & Company, steeplejacks of Louisville.

The smoke-stacks are 200 feet high and 5 feet in circumference. When reputable concerns and the most experienced purchasing agents like Mr. Davies, and contracting painters like H. Fraser & Company, use Dixon's Paint, what more need be said to prove paint efficiency and economy?

You can always "count on" Dixon's; may we equally count on you?

Specify and use Dixon's at your next painting, and see for yourself what important economies it will produce for you.

About Dressing Windows

(Continued from page 4967)

him. Ask him for suggestions as to which of his goods you should display, and when and how. You will find him a mine of suggestion, if he is worth his salt.

Make your window speak. Put signs in it; signs that tell something of what the window means in service and reasonableness of price.

Your window is a booth in Vanity Fair. Alongside it range other windows of other merchants. Be not outdone by them. "Keep thy shoppe, and thy shoppe will keep thee," is an ancient proverb. A modern mate for it would be: "Your window tells what your store is: make each worthy of the other."

Testimonial

**INDEPENDENT STEAM LAUNDRY
COMPANY**

Joseph Dixon Crucible Company,
Jersey City, N. J.

Gentlemen:

After using your Pioneer Boiler Graphite in our boilers for the past eight months, we find it is eminently satisfactory.

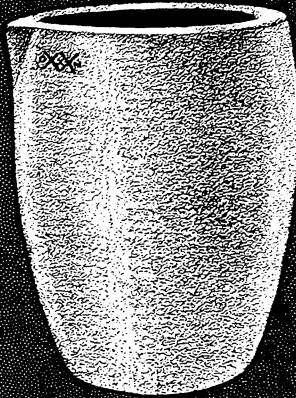
You may send the enclosed order at your earliest convenience.

ALEX NELSON, Engineer.

◆

THOSE who can, make;
Those who can't, save.

DIXON CRUCIBLES



Since 1827



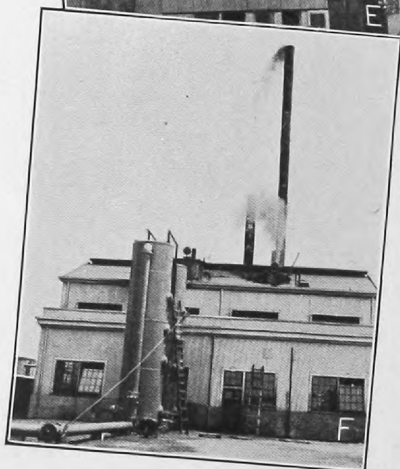
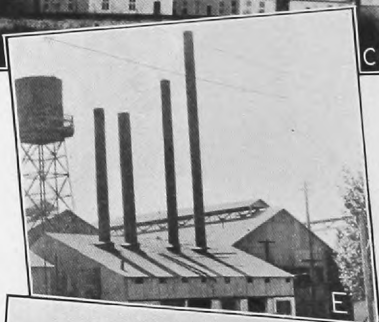
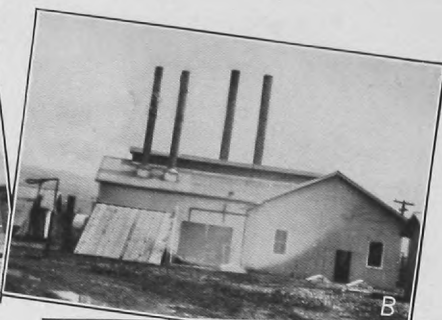
TRUSTWORTHINESS in a crucible eliminates fear of trouble at critical times.

Proper materials, careful workmanship,—plus the experience gained in nearly a century of crucible-making,—these have made the name DIXON known for crucibles of the highest quality.

Large or small, DIXON CRUCIBLES are uniform in composition, construction, and performance. You can order them with the assurance of getting a staple product.

Booklet No. 190 A gives valuable information on the care and use of Dixon Crucibles. A copy will gladly be sent on request.

Joseph Dixon Crucible Company
Jersey City, N. J.
Established 1827



"DIXONIZED!"

THE illustrations on this page were all taken by our Pacific coast representative, Mr. W. Shulman, and show various California structures protected with Dixon's Silica-Graphite Paint.

Wherever there is metal work in California, there you will find Mr. Shulman with his paint talk and camera.

The following explains the illustrations:

- A—Quail Pump Station, Associated Pipe Line Co., Quail, Cal.
- B—Pump Station, Union Oil Co., San Luis Obispo, Cal.
- C—Pump Station, Union Oil Co., San Marganta, Cal.
- D—Gas Holder, Contra Costa Gas Co., Contra Costa, Cal.
- E—Smoke stacks, Pratt-Low Preserving Co., Modesto, Cal.
- F—Smoke stacks and Generators, Contra Costa Gas Co., Contra Costa, Cal.



“Dixon’s is Saving Coal for Us”

DIXON’S Pioneer BOILER GRAPHITE

“Come around to see a regular boiler plant, eh, Tom?”

“I don’t mind admitting that we make more steam per square foot of heating surface than most plants. The boss got tired buying coal to heat the stone lining of the boilers, and the men never enjoyed chopping out the scale anyway. So everybody was glad when Dixon’s was given a trial.

“We knew the Dixon people would not put out a product that was not O.K., but still we were skeptical as to whether graphite would help much.

“Did not notice much improvement the first time the boilers were opened, but each time since it has been a cinch to rattle out the scale. The inspector says our boilers are in fine condition; the men are satisfied; and the company is buying much less coal than in the old days.

“When is *your* manager going to wake up? Funny how men wait for some one to force good things down their throats, as the old saying has it.

“Tell him to write for Booklet 190-T.”

Made in JERSEY CITY, N. J., by the

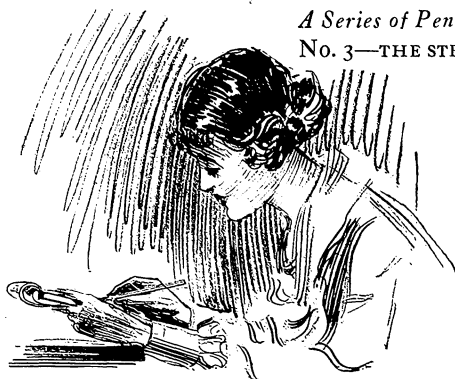
Joseph Dixon Crucible Company



Established 1827



A Series of Pencil Portraits
No. 3—THE STENOGRAPHER



"SHE thought Dixon's Eldorado pencils were only for artists. One day I persuaded her to use one of these pencils while taking my dictation.

"I watched her swift-moving fingers translate my words into strange short-hand hieroglyphics. No need for her to say how it eased and quickened her work.

"Sequel? Why, she's got every girl in the office using these same pencils."

**DIXON'S
ELDORADO**
"the master drawing pencil"

JOSEPH DIXON CRUCIBLE COMPANY
PENCIL DEPT. 190-J JERSEY CITY, N. J.

Canadian Distributors:

A. R. MacDougall & Co., Ltd., Toronto

Dixon's Eldorado is made in 17 leads—one for every need or preference.

**Write for
These Good
Booklets**

One is called "FINDING YOUR PENCIL"—a pencil service booklet for every one who uses a pencil. Write for it. It will help you choose exactly the right pencil for your particular work. Also write for our booklet—"A Study in Sepia." It shows the character of work that can be done with DIXON'S "BEST" Colored Pencils.

HB

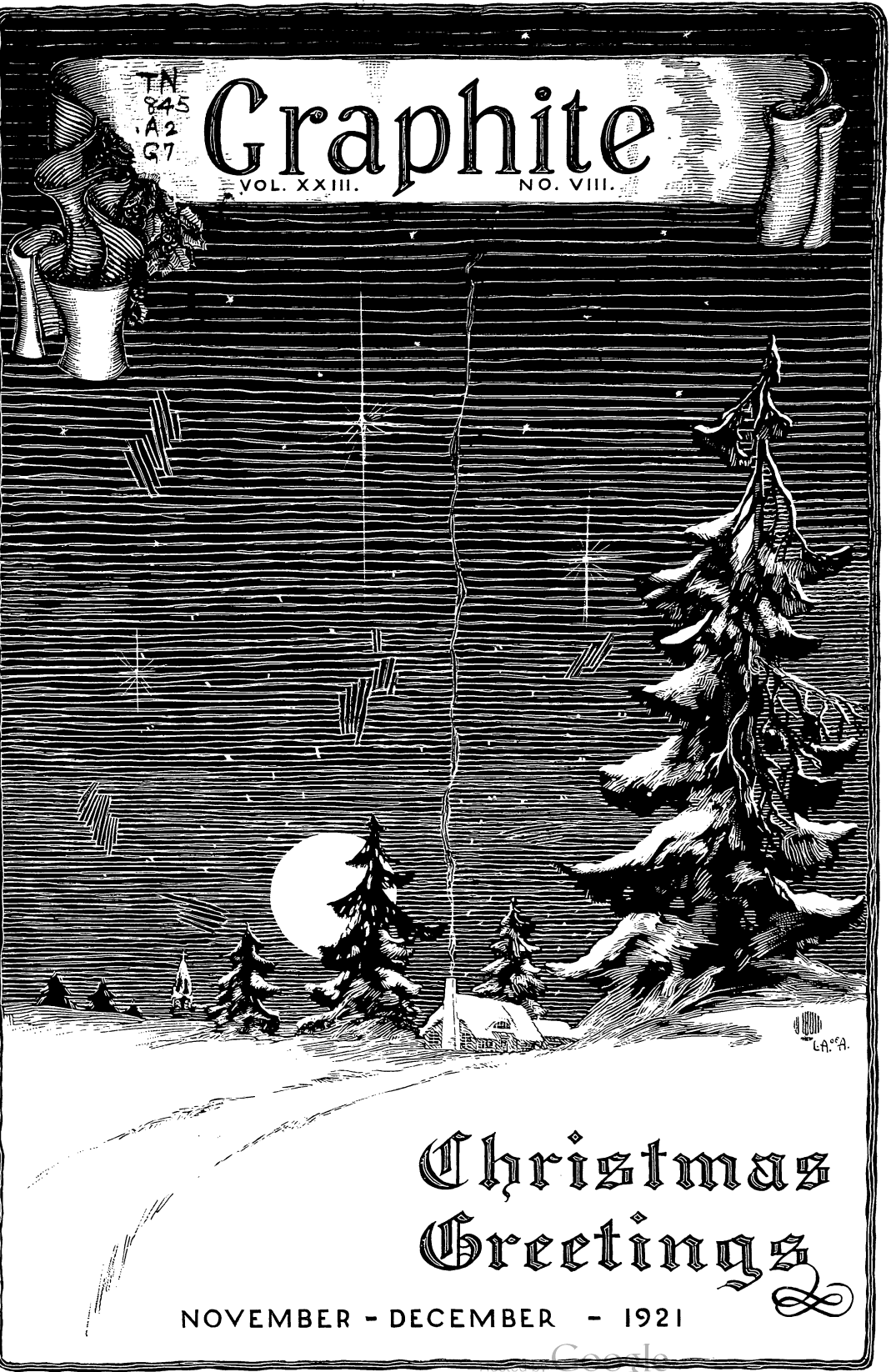
DIXON'S "ELDORADO" the master drawing pencil

TN
845
A2
G7

Graphite

VOL. XXIII.

NO. VIII.



Christmas
Greetings

NOVEMBER - DECEMBER - 1921

JOSEPH DIXON CRUCIBLE CO.

ESTABLISHED
1827

JERSEY CITY, N. J., U. S. A.

INCORPORATED
1868



*Miners, Importers and Manufacturers of
Graphite, Plumbago, Black Lead*



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HARRY DAILEY, *Secretary*

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WILLIAM KOESTER, *Treasurer*

JOHN I. McCOMB, *Assistant Secretary*
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A. R. MACDOUGALL & Co., LTD.,
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Sydney
Africa
Johannesburg

Asia

Calcutta Shanghai Soerabaya

Latin-America

Havana, Cuba Sao Paulo, Brazil
Mexico City, Mex. Buenos Aires, Arg.
Santiago, Chile

Canadian Agents

CANADIAN ASBESTOS Co.,
Montreal, Quebec

Graphite

A MONTHLY MAGAZINE PUBLISHED BY THE
JOSEPH DIXON CRUCIBLE COMPANY

AT JERSEY CITY, N. J.

U. S. A.

Volume XXIII

NOVEMBER-DECEMBER, 1921

Number 8

Graphite

THE reputation of graphite as a lubricant has been seriously impaired because people have not properly used it, or have been careless enough to use inferior grades.

We can state, however, that pulverized flake graphite can be used to excellent advantage, and every car owner should have a small can of it for emergencies.

Dixon's Motor Graphite is the best *spring lubricant* on the market. Oil or grease at best is only temporary and soon squeezes out and collects dirt. If you will mix graphite to a thick paste with kerosene, however, and spread it between the spring leaves, the springs will need no further attention for a year.

A thin paste of Motor Graphite and kerosene or shellac well rubbed into the surfaces of *wheel rims* will prevent tires becoming stuck to the rim. This feature is appreciated when a tire has to be changed along a road and no trouble is experienced in getting it off the rim and on again.

Motor Graphite may be dusted on *inner tubes* to prevent heating and chafing. It is better than talc. Apply sparingly.

When Dixon's Motor Graphite is properly used in *engine cylinders* it improves compression and therefore increases power, reduces the amount of lubricating oil required, reduces the carbon deposit, and prevents valves sticking.

Unfortunately, many people insist on using it in excess and get into trouble. The proper way to use it is to place it on a sheet of paper and hold it near the air intake of the carburetor while the engine is running at a good speed. The graphite will be drawn into the cylinders and distributed on the walls, piston heads, and valves. A scant teaspoonful every month or so is enough for an automobile in constant service. The quantity should be varied in proportion for engines not used regularly.

Do not use more graphite than is recommended; and do not mix it with the engine oil.

We wish to caution against mixing graphite with cup grease or gear grease. Don't do it. No one without experience knows the kind or amount of graphite to use. Do not even use cheap graphited grease. Graphite is peculiar; use the best or none at all.

Economic Value of Paint

Great Mistake to Imagine that the Only Use of the Brush is for Ornamentation
(*Jersey City Review*, Sept. 22)

OBSERVATION in most localities leaves the impression that too many buildings suffer from lack of painting. A great many property owners seem to assume that the use of the paint brush is the special prerogative of the rich, that it holds no advantage for the average man, if he can forego the pleasure of having ornamentation about. But painting is not chiefly valuable for ornamentation. It is chiefly valuable for sanitation, greater life, better service.

While paint does, of course, serve to improve the appearance of property, it is far more useful for protection than for ornament. A small amount of money and work expended in keeping a valuable piece of machinery painted will greatly add to its length of life. The same may be said of buildings.

Another useful object which is accomplished by painting is the improved sanitary condition of buildings and outhouses. The cost of such work (painting) is small, the necessary equipment is not expensive, and with proper care this will last a lifetime.



New Building, International Mercantile Marine Company

1 Broadway, New York City

THE wonderful history of this site, going back to 1626, is contained in *Ocean Ferry* for October, 1921, and any one interested in history should send to the International Mercantile Marine Company for the valuable number.

This handsome new building contains 1500 tons of structural steel. Walter B. Chambers is the architect; T. Kennard Thompson, consulting engineer; Bethlehem Steel Company, fabricators; A. E. Norton Company, erectors; and the Whitney Company of New York, general contractors.

Dixon's Silica-Graphite Paint protects the structural steelwork contained in this structure.

Stationers' Convention, Atlantic City, N. J.

THE Convention of the National Association of Stationers and Manufacturers has come and gone,—is now history.

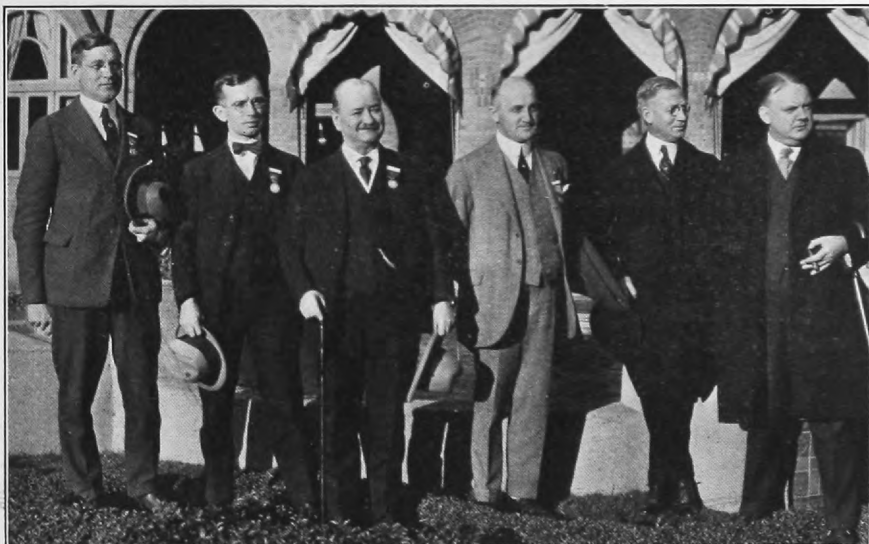
It was a stimulating convention. Perhaps it was the ozone for which Atlantic City is so justly famed that stirred up the red corpuscular energy of the conventioners, to such good purpose.

The Dixon forces, led by President George T. Smith, were on the ground. Hon. Edward I. Edwards, Governor of New Jersey, was on hand,—and the illustration at the right shows him the night of the banquet with Mr. Fletcher P. Gibbs on his right and Mr. George T. Smith on his left. The other Dixonites in attendance are shown at the foot of this page.

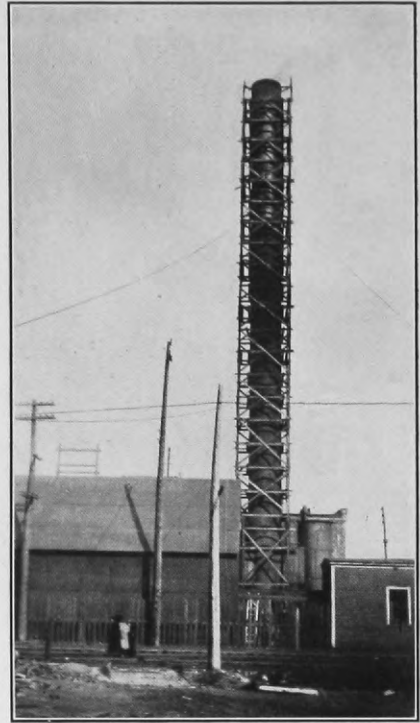
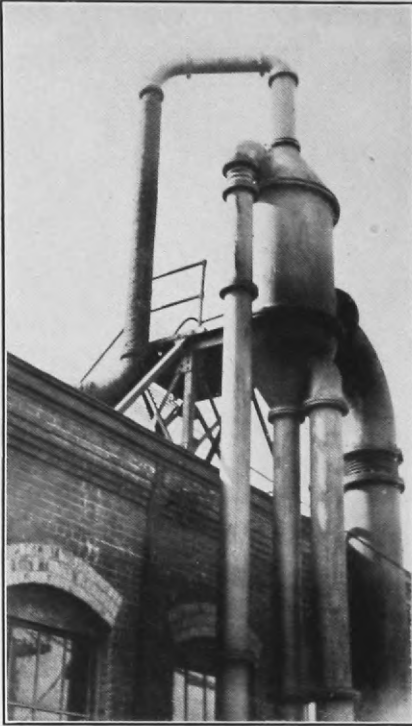
And it's Atlantic City again in 1922!



Mr. Fletcher P. Gibbs Mr. Geo. T. Smith
Hon. Edward I. Edwards



W. G. Stringer Herman Price John Ready A. J. Paft Wm. Ernst J. H. Schermerhorn



Condenser and Smoke-stack, Cape Breton Electric Co., Ltd.

Sydney, Nova Scotia, Canada

JOSEPH DIXON CRUCIBLE COMPANY:

With reference to Dixon's Silica-Graphite Paint, we are pleased to advise that we used this paint on our smoke-stack in 1916 (5 years ago), and on the condenser in 1917 (4 years ago), and the present condition of the paint is very good.

We have no hesitation in recommending Dixon's Silica-Graphite Paint, as it has given us complete satisfaction.

CAPE BRETON ELECTRIC CO., LTD.,
(Sd.) A. C. WEBBER,
Chief Engineer.

Mr. Webber is one of the best known engineers in Canada, and his company has an equally good reputation. Can Dixon claim better friends or give a more reliable testimonial?

A paint that gives five years' service, and, like Johnny Walker, is "still going strong," is the best and most economical paint to use. The Canadian Asbestos Company of Montreal are the Canadian selling agents for Dixon's Silica-Graphite Paint, and they are in a position to fill promptly any order placed with them by Canadian concerns.



Window Display, Bannister & Pollard Company

THE above illustration shows a very original display of Dixon's Automobile Lubricants in the window of the Bannister & Pollard Company, Newark, N. J.

The feature of the display was the "hill" made of white paper and lettered in red. This hill concealed an endless belt upon which were fastened miniature cars, the belt driven by a motor.

In front of the hill was a transmission gear case filled with Dixon's Gear Lubricant No. 677. How this lubricant follows the gears was easily seen.

At the right and left of the window were strips showing various racing drivers who are users of Dixon's Lubricants, while cans of the different

greases are attractively arranged in the window.

The small cars going up this hill visually demonstrated what can be done with real cars when lubricated with Dixon's. This and the moving gears caused many passers-by to stop, look, and go inside for more information or a can of grease.

We are told that the results of this window were very gratifying to Bannister & Pollard Company, and we wish to congratulate them upon their effective display.

Selling the Goods

COMMERCIAL TRAVELER—"My love for you, my dear Louisa, exceeds anything that can be offered in that particular line!"—*Strix, Stockholm.*



Bridge, Central Railroad of New Jersey

Bethlehem, Pa.

THIS bridge is known as bridge No. 21, L. & S. Division, and is over the Lehigh River. It was erected in 1908, and is painted with Dixon's Silica-Graphite Paint, the favorite and longest service paint in the railroad world.

◆
DIXON'S GRAPHITE AIR BRAKE GREASE assures dependable action of brake cylinders and triple valves under all weather conditions. Keeps brake cylinder packing leathers pliable and leak-proof. ◆

DIXON'S CENTER PLATE GREASE makes a train flexible and consequently prolongs life of wheels and saves in tractive power. The flake graphite lubricates long after the grease itself has disappeared.

◆
DIXON'S GREASE NO. 677—for signal and semaphore mechanisms.

Using Up the Short Pencils

THEY shouldn't be thrown away, and they shouldn't be allowed to be always among the missing, as they too frequently are.

We should use a fine pencil like we use a fine cigar—we should get out of it all the good there is in it by using it down to the last usable inch.

We have no other instrument for writing and drawing at once so fine, so light in the hand, so dependable as our good lead pencil.

Appreciating which we have made two pencil holders—of metal, Nos. 454 and 456, and of wood, No. 453. The characteristic lightness of the pencil is retained fully in these holders, which make it easy to use up your short pencils.

◆
HE thinks because he *knows* it all he ought to *tell* it all.



“Here Since 1878”

THE business that is approaching its golden anniversary must have given a service its community valued, —and appreciated.

And as we look at the “ELDO-RADO” display in the window of Richardson & Bishop, of Winnipeg, Canada, we see evidence enough that a business in keeping with its effectiveness and excellence of design is apt to grow and grow in strength until records are made and remade, again and again.



YOUR future depends upon how you continue to treat your customers of to-day while you are striving to find new ones. Remember that nothing is unimportant when striving to establish good will.—*Northern Furniture.*

Craftsmanship

CRAFTSMANSHIP is the crowning quality of excellence that comes only when a man enjoys his work.

The coppersmith of the Middle Ages who labored day and night, without thought of food or sleep, till he had made a perfect shield, was a real Craftsman.

Craftsmanship never looks at the clock. Whether in beating a shield, painting a landscape, printing a page, or in merely polishing a bit of brass to perfection, always there is the happiness that comes from doing the work beautifully.

A bit of real Craftsmanship is infinitely more than a job: it is the reflection of the soul of its maker. It says, “Who made me loved his work.” —*The De Vinne Press.*

Graphite

PUBLISHED MONTHLY BY THE
JOSEPH DIXON CRUCIBLE CO.,

AT JERSEY CITY, NEW JERSEY, U. S. A.

In the interests of Dixon's Graphite Productions, including Crucibles, Lubricants, Pencils, Paint, etc. Sent free upon request.

Vol. XXIII NOV.-DEC., 1921 No. 8

The Golden Legend

*"Heard music is sweet,
Unheard, sweeter."*

AND, reader, if you hear not the Angelic Choir on Christmas Eve with bodily ears, mayhap you will apprehend it with your spiritual auditory equipment. Voices in the air there are to-day, and not "ancestral voices prophesying war." But voices as of those that bind up wounds, that heal the hurts of hatred.

This is how our mind runs on Armistice Day, on the eve of the opening of the Conference on Disarmament. Who knows the name of the one who will lead it; whose will to achieve a victory greater than those of a Cæsar shall prevail for the breaking down of the barriers that are between peoples, for the leveling of the road that is to run among nations as a quiet street among neighbors, which shall be called the Way of Peace?

All the great awards of the world that have been made to its heroes in art, literature, and science are as nothing compared to the glory of the winning of this the first pitched battle of modern times between the forces that burn and slay and those that heal and build.

And we like to think that there is no man to-day who goes his way unmindful of what the next few months may bring forth of peace or of war; that there is no one who does not join the great urge: that, indeed, we are all like those afflicted people of war-devastated France who knelt in the dust of the roadside in the humblest spirit of thanksgiving at the sight of our own flag borne at the head of the first American contingent to front the foe.

And, mark you, this same flag still flies, now on the Quest Unutterable of Peace.

Ten Commandments of Business

HANDLE the hardest job first each day. Easy ones are pleasures.

Do not be afraid of criticism—criticize yourself often.

Be glad and rejoice in the other fellow's success—study his methods.

Do not be misled by dislikes. Acid ruins the finest fabrics.

Be enthusiastic—it is contagious.

Do not have the notion that success means simply money-making.

Be fair, and do at least one decent act every day in the year.

Honor the chief. There must be a head to everything.

Have confidence in yourself, and make yourself fit.

Harmonize your work. Let sunshine radiate and penetrate.—*Impressions.*

GOD rest ye, merry gentlemen,

Be not a whit dismayed.

The Business Tree is still full green—
Not withered, as it seemed, I ween,
Upon this Xmas Day.

Transmissions and Differentials Show
Higher Efficiency When Lubricated
With

DIXON'S No. 677 GEAR LUBRICANT

A TRANSMISSION gear box was tested in our Mechanical Laboratory under winter conditions—that is, temperature below freezing. The gears were placed in third speed and under full load.

In this test two lubricants were used, one a popular gear oil and the other Dixon's No. 677.

The initial lubricant temperature with Dixon's No. 677 was 26° F., and that with the popular gear oil 34° F.

Notwithstanding the distinct advantage of 8° F. higher starting temperature, the popular gear oil showed a power loss of as high as 3.4 H. P., while with Dixon's No. 677 the power loss was only 1.5 H. P., a saving of 56%.

This is only one of the tests that clearly prove the superiority of Dixon's No. 677 as a gear lubricant under all conditions.

Details of other tests will be sent upon request.

JOSEPH DIXON CRUCIBLE CO.

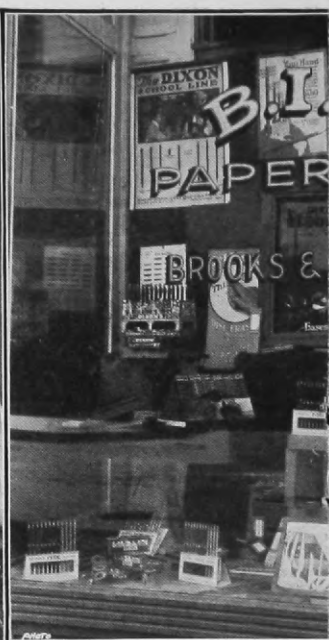
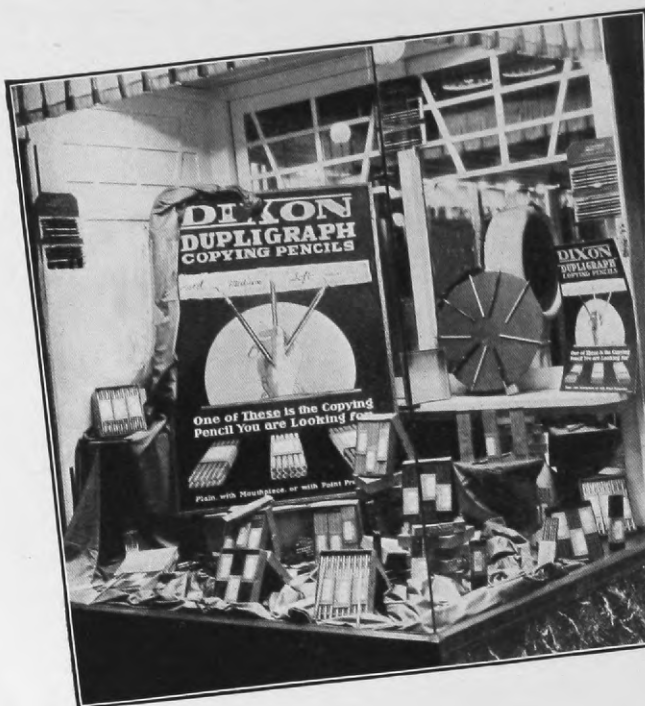
Jersey City, N. J.  Established 1827

MAKERS OF QUALITY LUBRICANTS

For Spur and Bevel Gears use Dixon's Gear Lubricant No. 677

For Worm Drives use Dixon's Gear Oil No. 675

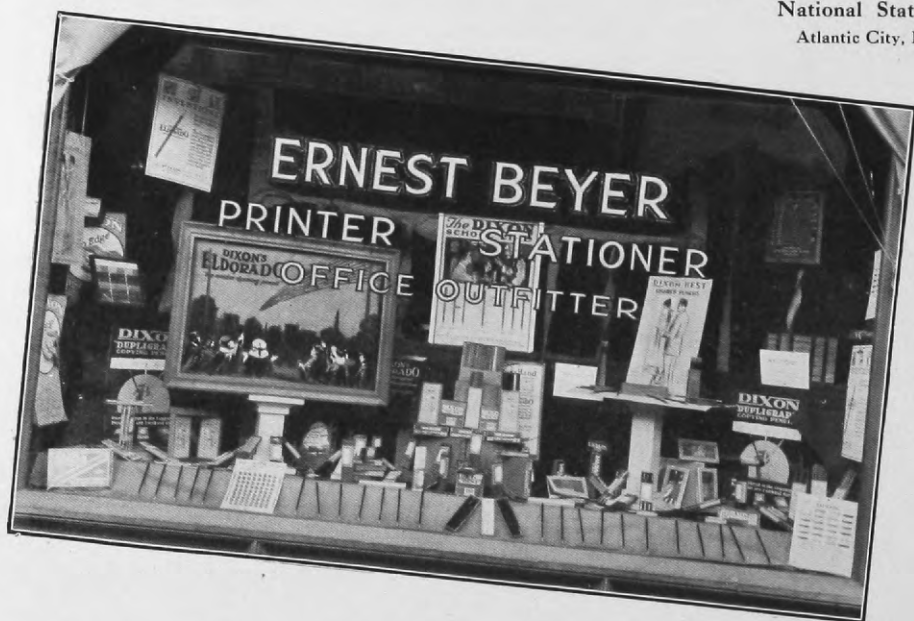
For Universal Joints use Dixon's Grease No. 672



DIXON PENCIL

National Stationer

Atlantic City, N. J.,





L DISPLAYS

ers' Convention

Oct. 11-13, 1921





Foote & Davies Co., Atlanta, Ga.

Dressing Your Windows

A WINDOW to be effective must be inviting. The passer-by must be drawn to it. Not every one is drawn by the same appeal, but some appeals are universal in their power to compel attention and invite favorable action.

"The power of beauty is part of the naked truth of things," says Joseph Conrad in "The Rescue."

So you choose your salespeople with an eye to their outward appearance. They must be well-mannered, their voices pleasant, their apparel neat,—and if you can count on all these and get a good measure of grace and beauty of person and figure along therewith,—well, then, you have drawn a prize. (Don't think we forget the brains, of course.)

Talk about silent salesmen! What is a window but a regiment of silent salesmen always on parade.

Give a thought to your windows. We think the reproductions of window displays used to illustrate this article will aid you.

What made them the successes they were? The power of beauty,—beauty in color and hue of the window cards, of the boxes and labels, and of the goods themselves.

Try to eclipse these displays and send us your photo for reproduction in GRAPHITE.



Otto Fischer, Stationer, Paterson, N. J.



C. S. Bush Co., Providence, R. I.

"Eldorado"—Keuffel & Esser Window Display

"SIMPLE, strong, and attractive"—one who saw it thus described the display in the C. S. Bush Co.'s window.

The size and design of this splendid window give it exceptional value for display purposes.



Raising the Price

MOTHER: "Johnny, will you be quiet for a bit?"

JOHNNY: "I'll do it for two bits."
—*Awgwan.*



When We Know

KNICKER: "How much does an inaugural cost?"

BOCKER: "We can't tell until the term is up."—*New York Herald.*

Did You Return the Graphite Card?

IN the last issue of GRAPHITE we enclosed a post-card to be filled out and returned stating whether or not you wished to continue to receive this publication in the future.

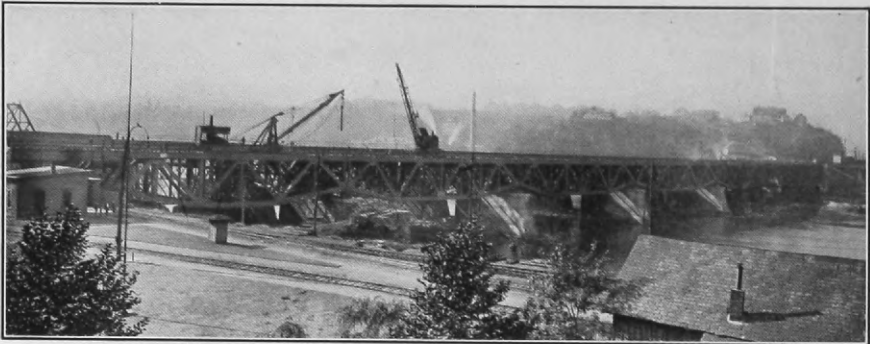
While many of these cards have been returned, there are still a great many yet to come in, and we trust that this notice will serve as a reminder to those who failed to return the card before.

If the card has been lost, simply fill in a postal with your name and address, and tell us that you want to get GRAPHITE.



Another Scandal

ROGER HORNSBY, the St. Louis star, won the 1920 betting championship of the National League.—*St. Louis Globe-Democrat.*



Delaware River Bridge, Central R. R. of N. J.

Easton, Pa.

THE bridge illustrated above was erected in 1919 and painted with Dixon's Silica-Graphite Paint. It is a riveted deck truss bridge, 1000 feet long. The tonnage of steel involved 2700 tons.

At the recent convention of the American Railway Bridge & Building Association, held at the Hotel McAlpin, New York City, "Dixon" was a "pass-word" for service with supervisors of bridges and building of railroads.

Dixon's Flake Graphite

Is unaffected by high temperatures;
Cannot be "carbonized" or ignited;
Cannot give off explosive vapors;
Will not accumulate dust or grit;
Does not clog discharge valves;
Improves the friction surfaces;
Prevents metallic contact;
Reduces the amount of oil;
Reduces friction;
Prevents shutdowns;
Saves power.
Use it!

"Use 25% Less Oil"

JOSEPH DIXON CRUCIBLE COMPANY,
Jersey City, N. J.

I have been using Dixon Flake Graphite No. 2 in the cylinders of my 18" x 36" Monarch-Corliss steam-engine and am very much pleased with the results.

A plain cup fitted with a screw cover and a valve is used to feed the graphite into the steam line. The cup is filled with dry graphite and is slowly emptied by the pulsation of the steam in the pipe.

I have been using 25 per cent. less oil. The packings now last much longer than formerly, and the exhaust valves, which were always dry when inspected, are now well lubricated.

It is better to use the larger graphite flakes, No. 1, in low pressure cylinders, because it is less apt to clog when wet with condensed steam in the cup.

Yours very truly,

M. R. OGLE, Engr.,

The Cuyahoga Lumber Company,
Cleveland, Ohio.

The Guide Post



BECAUSE Xmas-time is Youngster-time it is also Color-time.

What a drab thing it would be without oceans of color—color, strong, brilliant primaries, on toys, on decorations, in the inks of Xmas-books;

color on all sides; and best of all color in the dancing eyes and on the glowing cheeks of children.

Do you remember the time you craved a box of water-colors at Xmas? You wanted it as badly as that soldier suit, itself gaudily colored, that hung in the neighborhood toy-shop.

Color is the joy of the world—all the year 'round.

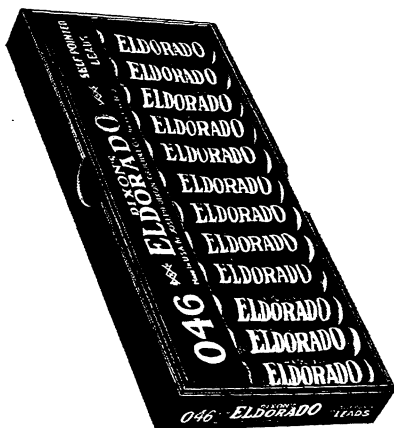
Let you take Color by the hand—it will unlock your heart and make you a boy again.

Wherefore we say to you: when you are looking for a box of paints or water-colors for your boy or girl, ask your stationer to show you one of the Dixon Dry-color Xmas boxes, containing 7 colors, 12 colors, and 24 colors.

And when your boy or girl looks under your Xmas Tree on the morning of Good Will to All Men, he will see there such a burst of color as will, mayhap, make him dream a sunset cloud has come to rest beneath its branches.

Something you've been waiting for

**DIXON'S
ELDORADO**
Self-Pointed Leads



To fit current styles of "small-bore" mechanical pencils.

Made of the same materials and by the same processes as the unrivaled leads of Dixon's **ELDORADO**—"the master drawing pencil."



A "Planned" Window Display at Grimes-Stassforth's

Los Angeles, Cal.

AN example of this type of display is the Eldorado-Keuffel-Esser reproduction on this page.

Few passers-by were able to resist the compelling attractiveness of this window.

And many who stopped to look went in to buy.

Beauty and directness were the keynotes of this admirable display.

◆
DIXON'S GRAPHITE JOINT COMPOUND is not a cement which hardens, but rather a lubricant for the threads of pipes, bolts, nuts, etc., making them easy to screw up and allowing them to be taken apart at any time without difficulty.

Joints made with this material can never rust, corrode, or stick. It is much superior to red or white lead, and is about three and a half times as bulky.

Rush!

IT is part of the duty of every executive to write "rush" on many pieces of paper, without explanation.

This is not swinging the whip, not a bit of it.

But it is to indicate that the matter is to be rushed, in the first place, can be rushed; that is, to rush it will not be necessary to run chances of ruining it; and, in the second place, it shows that speed is an absolute essential in what probably is an emergency.

And business is just one emergency after another.

Now you will find some who act as if inspired when they see this word. It starts them going in the right direction.

Others either see it not, or, seeing it, do not catch its spirit. And the dowdy indifference of these makes good men mad men.

◆
As handy as a lead pencil.



Smoke-stacks, Southern Pacific R. R. Co.

(Bay Shore Road), San Francisco, Cal.

THE above illustration shows a smoke-stack owned by the Southern Pacific Railroad Co., being painted by W. M. Scott (contracting painter of San Francisco) with Dixon's Silica-Graphite Paint.

Dixon's Paint is widely used on the Pacific coast for smoke-stacks, because of the remarkable service it has given. Try it out at your next painting and see what it will do for you.



WHAT you will not find out from a critic: *direction*. ◆

IMAGINATION enables a man to put himself in the other fellow's place. So that, if business is service, certainly that man can render the best service who is able to anticipate the wants of his customers by putting himself in their places.—*Through the Meshes*.



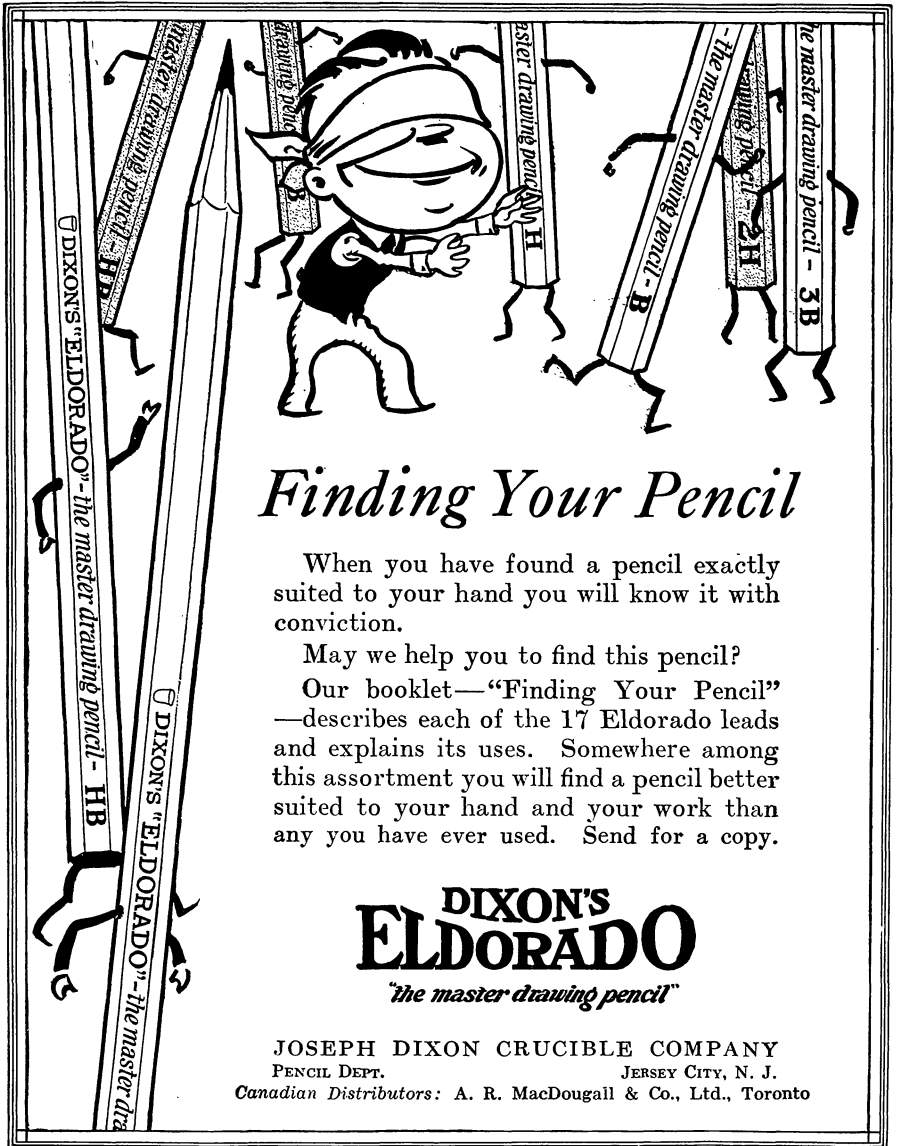
Underwood Building

Market Street, San Francisco, Cal.

KALEIDOSCOPIC Market Street of colorful San Francisco! The Dixon photographer, Mr. W. Shulman, pointed his camera out of the Dixon office, San Francisco, and this is what he filmed:

1. In the center, the Underwood Building, metal roof and cornices painted with Dixon's Silica-Graphite Paint.
2. The electroliers of the Pacific Gas & Electric Co. in the foreground, and the car trucks, also painted with Dixon's Paint.

San Francisco is a Phoenix rising from her ashes triumphant. In 1907 all this section was ruined by earthquake and fire. San Francisco stands for the American spirit, the slogan of our Salvation Army, viz.: "A real man may be down, but he's never out."





DIXON "NURL-O" (a new pencil)

It is new because of its finish.

Its finish makes it easy to hold.

This means it will make new friends for the DIXON
LINE—and hold them.

Write for samples and price, if you are a dealer or office executive.



Dixon's Foundry Facings

ARE meeting the demand for better and smoother castings with less time required for finishing. It is worth the trouble many times over for a foundryman to find out the exact facing suited to his peculiar needs. We are in a position to advise unbiasedly, for, owing to our enormous use of all kinds of graphite from many parts of the world, we manufacture a remarkably complete line of facings, each one of which is adapted to some one particular kind of work, working condition, or material.

We recommend Dixon's 2441 Silver Lead Facing as the most satisfactory for every sort of work. For core washes a small amount of clay or molasses water can be added, but for slicking and "printing back," Dixon's 2441 will do everything that is possible for a graphite facing to do.



Playground Fence, Bureau of Parks

Portland, Ore.

THE above structure was painted two years ago with Dixon's Silica-Graphite Paint and is still in good condition.

Oregon, the lumber, apple, and salmon State, with all its fine weather, has lots of rain and dampness at times, and a paint that stands this, and also the attrition that a playground fence must endure, must be a good paint.



Gas Plant, Rocky Mount Public Works

Rocky Mount, N. C.

WE illustrate above the gas plant of the Rocky Mount Public Works. The gas holders, smokestacks, and other metal-work were painted in 1918 with Dixon's Silica-Graphite Paint, the popular protective paint with gas concerns.

Mr. L. M. Jordan, the efficient superintendent of the Rocky Mount Gas plant, would not have chosen Dixon's if it were not the most reliable and economical. Dixon's is like the "marines." Wherever there is hard work over the world to do, its slogan is, "Let's go there."

◆
DIXON HUB LINER GREASE—Prevents excessive wear of locomotive hub liner plates and consequent lateral play of locomotive on its axles.

Work

IT is my experience that nothing will put a man in tune and keep him in harmony with his work like getting on the job early in the morning and taking advantage of the full day nature provides out of every twenty-four hours.

Work is a habit—the best one any man can have in business. When a man acquires that habit and makes it a part of himself, everything else seems to adapt itself to his liking.

There may be variations in the net results of the days, but the sum total of the months and years will work out right. It is more than an argument—it is even more than a fact. It is a *law* which will govern you and me in all we do.—*The Finder's Salesman*.

◆
PRIDE goeth before a Fall—Dignity cometh after.

Since 1827

When Joseph Dixon made the first successful "black lead" crucible, Dixon Crucibles have maintained a standard of efficiency and quality that has kept them in the lead. The accumulated knowledge of nearly a century of crucible manufacture is woven into the walls of every Dixon Crucible.



DIXON CRUCIBLES

Satisfactory crucible service for every metallurgical requirement is assured when DIXON'S are used.

Large or small, DIXON CRUCIBLES are uniform in composition, construction and performance. You can rely on them because the experience gained through ninety-two years of crucible-making stands back of every one.

There need be no worry about crucible trouble in the middle of a melting operation if the crucible you use bears the name DIXON.

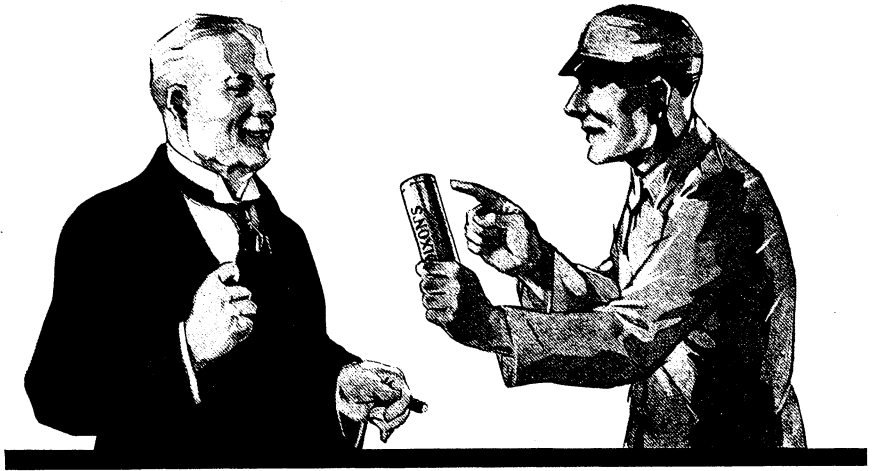
Write for Booklet No. 190-A.

JOSEPH DIXON CRUCIBLE CO.

Jersey City, N. J., U.S.A.

Est. 1827





“Speakin’ of Belt Dressing”

Insure the life of your
belts with

Dixon's Solid Belt Dressing

“Speakin’ of belt dressing, here’s the best we’ve ever had. The men like it because it does not rot the belts by drying out all the life or oil or whatever it is that makes them firm but pliable, so they grip the pulleys instead of slipping. This stuff keeps the belts in A-1 condition. Our old troubles have disappeared.

“When belts slip they not only waste power (which amounts to a surprisingly large item of dollars and cents in a plant where a lot of belts are used), but they destroy themselves as well.

“It costs money to renew belts frequently, and it costs money to throw away the power, day in and day out, that is wasted at the pulleys. Why so many keen business men and managers do not check up on such leaks beats me.”

It beats us, too. We suggest that you ask for “The Proper Care of Belts,” Booklet 190-O.

Made in JERSEY CITY, N. J., by the
Joseph Dixon Crucible Company

Makers of Dixon's Graphite Lubricants for
Gears, Transmissions, and all moving parts



Established 1827

